MINE SAFETY

(METALLIC AND NONMETALLIC MINES)

UNIVERSITY
OF MICHIGAN

HEARINGS

MAY 1 ? 1958

BEFORE A

MAIN
READING ROOM

SUBCOMMITTEE OF THE
COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

EIGHTY-FIFTH CONGRESS

FIRST SESSION

ON

H. R. 4111, H. R. 3639, H. R. 3394, and H. R. 1240

BILLS RELATING TO PROPOSED LEGISLATION IN REGARD TO MINE SAFETY (METALLIC AND NONMETALLIC MINES)

HEARINGS HELD IN WASHINGTON, D. C., MAY 28, JUNE 20, JULY 31, AND AUGUST 15, 1957

Printed for the use of the Committee on Education and Labor

UNITED STATES
GOVERNMENT PRINTING OFFICE
95122 WASHINGTON : 1958

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MINE SAFETY

(Metallic and Nonmetallic Mines)

TUESDAY, MAY 28, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON SAFETY AND COMPENSATION
OF THE COMMITTEE ON EDUCATION AND LABOR,
Washington, D. C.

The subcommittee met, pursuant to call, at 10 a. m. in room 429, Old House Office Building, Hon. Roy W. Wier (chairman of the subcommittee) presiding.

Present: Representatives Wier and Bosch.

Mr. WIER. In calling this meeting to order might I make this brief résumé. This committee of five has been set up to give due consideration to such legislation as comes within its jurisdiction by the chairman of the full House Labor Committee, Mr. Barden.

We have about five jurisdictions within the Labor Department, health, education, and labor which come within the scope of our activity.

Due to the fact that last year this question of mine safety, dealing with the metallic mines of the Nation, came to the attention of our Labor Committee it resulted in a subcommittee being set up by the chairman to visit certain mining areas in this Nation for the purpose of gathering information that would be pertinent to mine safety legislation in the field of metallic mining. Soft coal and hard coal also are covered now by the Mine Safety Act.

Because this committee, or subcommittee, that made these visits to these mining areas has completed its job, I felt it was advisable to have this meeting for the purpose of hearing such reports as members of that subcommittee might want to make to this subcommittee, as well as the authors of four bills that this committee has in its possession at this time dealing with this subject of mine safety in metallic mines.

This is not an open hearing for opposition or proponents, or proponents and opponents; it is merely to hear our subcommittee and the authors of bills on the subject introduced by Members of Congress.

I think that outlines the purpose of this meeting. This is not our first meeting. We have a prior meeting about 10 days ago at which 4 members of this subcommittee were present, and we merely formulated a little program and got consent to go into this subject.

I might say in behalf of the absent members that they have contacted me and made reasonable excuses as to why they cannot be with us this morning.

With that we shall pick up here, anyway, and proceed to hear such members of the subcommittee as desire to be heard and those who have bills in.

For our first witness here we have this morning Congressman Metcalf, of Montana, who was chairman of the subcommittee that made these investigations and held these hearings in various parts of the country. I presume other members of his subcommittee will make an appearance a little later.

If there is no objection we will let Mr. Metcalf take over and proceed in any way he sees fit. He has a fine knowledge of this problem inasmuch as he comes from Montana where they have all the metals in the world.

You can outline to the committee your experience in this field, Mr. Metcalf.

Before you do that, I will ask to have inserted in the record a copy of your bill.

(H. R. 3639 is as follows:)

[H. R. 3639, 85th Cong., 1st sess.]

A BILL Relating to certain inspections and investigations in metallic and nonmetallic mines and quarries (excluding coal and lignite mines) for the purpose of obtaining information relating to health and safety conditions, accidents, and occupational diseases therein, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior, acting through the United States Bureau of Mines, is hereby authorized and empowered to make or cause to be made annual or necessary inspections and investigations in metallic and nonmetallic mines and quarries the products of which regularly enter commerce or the operations of which substantially affect commerce—

(a) for the purpose of obtaining information relating to health and safety conditions in such mines and quarries, the causes of accidents involving bodily injury or loss of life therein, or the causes of occupational diseases originating therein, whenever such health or safety conditions, accidents, or occupational diseases burden or obstruct commerce or threaten to burden or obstruct commerce;

(b) for the purpose of obtaining information relating to health and safety conditions in such mines and quarries, the causes of accidents involving bodily injury or loss of life therein, or the causes of occupational diseases originating therein, as a basis for determining the most effective manner in which the public funds made available for the protection or advancement of health or safety in metallic and nonmetallic mines and quarries, and for the prevention or relief of accidents or occupational diseases therein, may be expended for the accomplishment of such objects;

(c) for the purpose of obtaining information relating to health and safety conditions in such mines and quarries, the causes of accidents involving bodily injury or loss of life therein, or the causes of occupational diseases originating therein, as a basis for the preparation and dissemination of reports, studies, statistics, and other educational materials pertaining to the protection or advancement of health or safety in metallic and nonmetallic mines and quarries and to the prevention or relief of accidents or occupational diseases therein;

(d) for the purpose of obtaining information relating to accidents involving bodily injury or loss of life in such mines and quarries, or relating to occupational diseases originating therein, to be transmitted to the Bureau of the Census for use in connection with the preparation and compilation of the various census reports; and

(e) for the purpose of obtaining information relating to health and safety conditions in such mines and quarries, the causes of accidents involving bodily injury or loss of life therein, or the causes of occupational diseases originating therein, to be transmitted to the Congress for its consideration in connection with legislative matters involving health and safety conditions, accidents, or occupational diseases in metallic and nonmetallic mines and quarries.

SEC. 2. The Secretary of the Interior, acting through the United States Bureau of Mines, is further authorized and empowered to make or cause to

be made the inspections and investigations provided for in the first section of this Act at other than annual intervals at any time in his discretion when the making of such inspections or investigations in the mine or quarry concerned will be in furtherance of the purposes of this Act.

SEC. 3. The Secretary of the Interior, acting through the United States Bureau of Mines or any duly authorized representative of such Bureau, shall be entitled to admission to any metallic and nonmetallic mine or quarry, the products of which regularly enter commerce or the operations of which substantially affect commerce, for the purpose of making any inspection or investigation authorized under the preceding sections of this Act.

SEC. 4. Any owner, lessee, agent, manager, superintendent, or other person having control or supervision of any metallic and nonmetallic mine or quarry subject to the provisions of section 1 or section 2 of this Act who refuses to admit the Secretary of the Interior, acting through the United States Bureau of Mines, or any duly authorized representative of such Bureau, to such mine or quarry, pursuant to the provisions of section 3 of this Act, shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not exceeding $500 or by imprisonment not exceeding sixty days, or by both.

SEC. 5. Every owner, lessee, agent, manager, superintendent, or other person having control or supervision of any metallic and nonmetallic mine or quarry, the products of which regularly enter commerce or the operations of which substantially affect commerce, shall furnish to the Secretary of the Interior, acting through the United States Bureau of Mines, or to any duly authorized representative of such Bureau, upon request, complete and correct information to the best of his knowledge concerning any or all accidents involving bodily injury or loss of life which occurred in such mine or quarry during the calendar year in which the request is made or during the preceding calendar year.

SEC. 6. The Secretary of the Interior, acting through the United States Bureau of Mines, is hereby authorized and directed—

(a) to report annually to the Congress, either in summary or detailed form, the information obtained by him under this Act, together with such findings and comments thereon and such recommendations for legislative action as he may deem proper;

(b) to compile, analyze, and publish, either in summary or detailed form, the information obtained by him under this Act, together with such findings concerning the causes of unhealthy or unsafe conditions, accidents, or occupational diseases in metallic and nonmetallic mines and quarries, and such recommendations for the prevention and amelioration of unhealthy or unsafe conditions, accidents, or occupational diseases therein as he may deem proper;

(c) to prepare and disseminate reports, studies, statistics, and other educational materials pertaining to the protection or advancement of health or safety in metallic and nonmetallic mines and quarries and to the prevention or relief of accidents or occupational diseases therein;

(d) to expend the funds made available to him for the protection or advancement of health or safety in metallic and nonmetallic mines and quarries, and for the prevention or relief of accidents or occupational diseases therein, in such lawful manner as he may deem most effective in the light of the information obtained under this Act to promote the accomplishment of the objects for which such funds are granted;

(e) to transmit to the Director of the Census, either in summary or detailed form, the information obtained by him under this Act, for use in connection with the preparation and compilation of the various census reports; and

(f) to make available for public inspection, either in summary or detailed form, the information obtained under this Act as soon as practicable after the acquisition of such information.

SEC. 7. The execution of the provisions of this Act shall devolve upon the United States Bureau of Mines and the Secretary of the Interior may designate other bureaus or offices in the Department of the Interior to cooperate with the United States Bureau of Mines for such purpose. In order to promote sound and effective coordination of Federal and local activities within the field covered by this Act, the Secretary of the Interior, and the several bureaus and offices under his jurisdiction, shall cooperate with the official mine inspection or safety agencies of the several States and Territories, and, with the consent of the proper authorities thereof, may utilize the services of such agencies in connection with the administration of this Act. Copies of all findings, recommenda-

tions, reports, studies, statistics, and information made public under the authority of clauses (b), (c), and (f) of section 6 of this Act shall, whenever practicable, be furnished any cooperating State or Territorial agency which may request the same.

SEC. 8. (a) The Secretary of the Interior, acting through the United States Bureau of Mines, shall create and establish an advisory committee composed of not more than six members to exercise consultative functions in connection with the administration of this Act. Such committee shall be composed of representatives of metallic and nonmetallic mine and quarry owners and of representatives of metallic and nonmetallic and quarry workers in equal number. The members of such committee shall be appointed by the Secretary of the Interior without regard to the civil-service laws.

(b) The advisory committee in cooperation with the Bureau of Mines shall promulgate a code of reasonable standards and rules pertaining to safety and health conditions and practices in metallic and nonmetallic mines and quarries to serve as a guide for making recommendations under this Act.

SEC. 9. The Secretary of the Interior, acting through the United States Bureau of Mines, shall have authority to appoint, subject to the civil-service laws and the Classification Act of 1949, as amended, such officers and employees as he may deem necessary to carry out the provisions of this Act, and to prescribe the powers, duties, and responsibilities of such officers and employees.

SEC. 10. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be necessary to carry out the provisions of this Act.

SEC. 11. For the purposes of this Act—

(1) The term "commerce" means trade, traffic, commerce, transportation, or communications between any State, Territory, possession, or the District of Columbia and any other State, Territory, possession of the United States, or between any State, Territory, possession, or the District of Columbia and any foreign country, or wholly within any Territory, possession, or the District of Columbia, or between points in the same State if passing through any other State or through any Territory, possession, or the District of Columbia or through any foreign country.

(2) The term "metallic and nonmetallic mines and quarries" includes all types of mine and mining operations including but not limited to mines, quarries, open pit operations, and strip mines, except that it shall not be deemed to include coal and lignite mines.

SEC. 12. If any provision of this Act, or the application thereof to any persons or circumstances, is held invalid, the remainder of this Act, and the application of such provision to other persons or circumstances, shall not be affected thereby.

STATEMENT OF HON. LEE METCALF, MEMBER OF CONGRESS FROM THE STATE OF MONTANA

Mr. METCALF. Thank you, Mr. Chairman.

I have not a formal statement this morning, as you know, nor do I propose at this time to go into some of the technical aspects of this legislation, but rather to relate to the committee what impelled me to introduce this legislation. I believe the same force has been brought on the other members who have similar legislation. I would like to bring out some of the general facts brought out in the course of the hearings held last fall.

We know that in metallic and nonmetallic mines we have had a series of accidents over many, many years so that the danger of such mines has brought about a good deal of State legislation.

In some States we found in our investigation last fall that State mine safety activity was at a relatively high level.

In other States we learned that it was at a relatively low level.

We found that mine inspectors in some States were appointed, and in other States elected either on a county or statewide basis. Some-

times they were under the control of the mining corporations who owned the mines and other times they were independent.

There is a hodgepodge of mine safety legislation for the control of safety factors in the metallic and nonmetallic mines.

In addition to that the committee learned that there is a lack of information about safety and safety conditions in metallic and nonmetallic mines. That is the result of inability on the part of the Bureau of Mines to assemble the information quickly and readily and have it before us.

We appeared before the Appropriation Committee this year and asked for an additional appropriation for the Bureau of Mines so that they could bring up their reporting system, bring their system up to date. Part of that was successful. There is an increase of about a quarter of a million dollars to increase this reporting system, so that this committee, your committee, Mr. Chairman, will have the advantage of more up-to-date statistics and later information than any committee had. That was in the Department of the Interior appropriation bill and it already has been signed by the President.

We also asked for additional information on the inhalation of dust and uranium poison. We asked for that appropriation in the appropriation of the HEW and failed to receive it this year. That is an important field that my committee only began to get into. It is a field which needs to be surveyed again. The information we have is old. Some of it is more than 20 years old as to silicosis, and we have no information whatsoever as to the effect of industrial diseases caused by radiation and such new activities as have come about in this atomic age. We do not know what safety devices, what safety legislation, or what kinds of inspections we should have in those uranium mines in the Colorado plateau, for instance, or in those coal mines where they are now taking out uranium in South and North Dakota, and in some of these other areas in New Mexico.

Last year, when the committee quit, after field hearings in representative types of mines, deep mines in Montana, open-pit mines in Michigan, in mines of other types as we could visit them, and after we held full-scale hearings here in Washington where we heard the Department, we came to the conclusion that there was a need for some Federal legislation to gather information as to safety activities all over the country, to disseminate that information throughout to the different mining companies in all of the States, to attempt to unify State procedures, and to assist the States in carrying out and in enforcing their own safety codes and safety legislation.

These bills were reintroduced. These bills apply only to the metallic and nonmetallic mining industry. They have no enforcement procedure. They are merely reporting bills and merely require annual inspections and require the mining corporations that are involved to admit the inspectors in their safety investigations.

I believe they will be adequate to take care of the safety needs without enforcement procedure. They will benefit the industry by bringing about unification of safety methods, and they will benefit both labor and management by saving lives all over the country.

This is a bipartisan approach. Mr. McConnell, the chairman of this committee, is the sponsor of one of the bills which is almost identical to mine, and Mr. Saylor is sponsor of another.

This is also an approach favored by all branches of labor, both the International Union of Mine, Mill, and Smelter Workers in my district and the United Steelworkers who have unions in other parts of the country and are rivals in many areas. They are unified in support of this legislation.

Last year management came and testified before our committee and the Department came up and filed adverse reports to this bill, and labor representatives came in and testified. They had diverse testimony on many things, but they were all united, and they all agreed, that there was a need for greater safety in metallic and nonmetallic mines, that there was a need for better reporting of accidents, and there was a need for a better dissemination of information between the various mining regions of this country.

Therefore I urge that this committee pick up where my committee left off, hold additional hearings to get greater and more comprehensive information, and pass some sort of legislation such as is here proposed.

Thank you, Mr. Chairman.

Mr. WIER. I know you have the visits you made outlined in your report.

Mr. METCALF. Yes, sir.

Mr. WIER. Every member of this subcommittee has a copy of your report.

For the record, Congressman Metcalf, would you repeat the localities that you visited and the type of mineralogy involved in that locality?

Mr. METCALF. Yes, sir, Mr. Chairman. We went into the iron mines of Michigan to observe open-pit operations, those great open-pit operations up there. We found that there is a relatively safe operation.

We went into the deep mines in Butte, Mont., the deep copper mines, sometimes more than a mile below the surface, to observe that older type of deep metallic operation, and we found a very hazardous and dangerous sort of mining that necessarily follows from that type of mining operation.

We desired to go down into Alabama to see another type of operation that they have there, which is a shallower mine, some open-pit operations, and we desired to go into the Southwest to see the metallic open-pit mines down there. We have been urged to go into some of the copper mines on the Michigan Peninsula where they have this unusual hazardous rock blasting, where pressures have just literally caused the rocks to explode down there in those very deep mines.

In our report we recommended that the subcommittee, or representatives of some other committee which succeeded ours, visit at least the Alabama and the Southwest areas.

We recognize and we discovered that there is a tremendous difference between such open-pit operations as they have in Michigan, the iron ore country, and the hard-rock and deep-rock mines of Butte.

In addition there is this new uranium development and the risks of radiation about which no one has any information. That creates another industrial safety hazard that the committee did not have an opportunity to go into, so there is an outline of the problems by

regions which this committee can either have people come in to discuss, or, better still, go look and see for yourself just what is happening in some of those mines.

Mr. WIER. Questions, Mr. Bosch?

Mr. BOSCH. Could you give me an idea as to what your committee discovered on the question of absenteeism of workers in the mine areas because of conditions?

Mr. METCALF. Because of safety conditions?

Mr. BOSCH. Right.

Mr. METCALF. I do not recall that we went into that. That is an important factor, of course.

Absenteeism in those highly mechanized operations is not of a great deal of importance, but in an area like Butte, where one of the local union officials will discover a dangerous condition, they might create a situation where men would stay home and away from work rather than work under such a condition. However, we did not find that absenteeism resulted.

In fact, Mr. Bosch, we found that contract miners, for example, in Butte, Mont., are as much to blame as anyone for unsafe and hazardous conditions in the mines. These men must be protected from themselves and their own carelessness and protected from their own desire to get a greater amount of production in a day and take some shortcuts in order to achieve that.

Mr. BOSCH. That leads me to my next question. What did your committee find was the situation with regard to labor and management's cooperation in the various stages of safety problems?

Mr. METCALF. I believe that our investigation showed that it was uniformly excellent, uniformly excellent. In some areas it was on just the highest possible plane.

Management is trying in every way it can to make these mines safer. Labor is trying in every way it can through its leadership and through the individuals to save their own lives.

As I say, however, the legislation, inspectors themselves, carelessness sometimes of the laborer who is trying to get another load of ore out, or the manager who is trying to make a production schedule will create hazardous conditions that the States have shown themselves in some areas unable to cope with.

Mr. BOSCH. Would you say that there was a promulgation of procedure with regard to periodic safety inspections by management?

Mr. METCALF. More or less in every area; both in every area we visited and in areas where we had testimony which we did not visit.

Mr. BOSCH. What about the activity of labor and management in giving first aid programs?

Mr. METCALF. Splendid, outstanding. It has been one of the things that the Bureau of Mines has concentrated on, has had an instruction program on, and I believe the Bureau is entitled to a great deal of commendation for their first-aid program, their mine safety, and mine rescue programs, the teams they have instructed, and management and labor have cooperated just 100 percent.

Mr. BOSCH. You feel this legislation would implement the existence of that cooperation to a greater degree?

Mr. METCALF. This is not punitive legislation in any sense. In most of these areas both management and labor, and the Bureau of Mines up to their limited capacity, are doing the best job they can do.

Mr. WIER. During the hearings you had with management, the mine operators and the departments involved, particularly with the Department of the Interior, in order to prepare this committee would you care to advance some of your experience as to their views?

I understand the Department of the Interior might have some opposition to this legislation, and I would like to get it from you before we get it from them.

Mr. METCALF. The Department of the Interior filed an adverse report on this legislation last year. I believe they filed a report on this legislation this year, but I do not remember.

The official position of the Department of the Interior is that it is opposed to any extension of its present very limited authority.

Public Health Service gave some of the best testimony with respect to silicosis and other lung and dust inhalant diseases that I have seen anywhere, although there is an adverse report from the Department there.

We had fine cooperation both from the Department of the Interior and the Public Health Service in pointing out areas where at least some additional cure, whether by legislation or by some other means, some cure has to be made for sickness in industry.

Mr. WIER. What is your reaction to setting up this legislation, if enacted into law, which automatically sets up this reporting and inspection division?

We have the coal mine inspection bureau today. Is it the thought of your committee after going into this that this would be a separate division of mine inspection, or would it have some relationship to the so-called coal mine inspection bureau?

Mr. METCALF. It would have no relationship but it would be parallel. It necessarily has to be separate. The problems of the two industries are completely different.

The mining operations are just as different as any other industrial operations could be, and an experienced coal mine inspector would be lost in one of those deep mines we have in Butte. Metallic or nonmetallic mine inspectors, at the same time, would be lost in a good many ways in a coal mine, but it would be a parallel sort of thing.

They could use the same inspecting system that they have in the coal mines, the same general regions, and things of that sort, but they would have to have different personnel and establish different standards.

Mr. BOSCH. On that same subject, have you given any thought to what the cost of the setup of such a new bureau might be?

Mr. METCALF. We asked about the cost and it is in the hearings. I do not recall right now, Mr. Bosch. Before this record is complete I will ask permission to look up the hearings and tell you what page it is on.

Mr. WIER. One more question while you are here. As chairman of the subcommittee I learned that three of these bills which were introduced by you, Mr. McConnell, Mr. Saylor, and Mr. Kelley deal with metallic and nonmetallic mines, but I think 1 or 2 of them deal with quarries. I don't know what type of quarry they refer to.

Is there any expression you want to lend to the quarry system?

Mr. METCALF. I believe my bill deals with quarries and I believe Mr. Kelley's bill deals with quarries. The other bills have eliminated quarries. There is not a great deal of difference.

The definition almost includes quarries whether it is specifically included or not.

I know nothing about quarries, Mr. Chairman.

Mr. WIER. Off the record.

(Discussion held off the record.)

Mr. WIER. My next question was going to be as to the coverage of the definition of quarries, of which we have many in this Nation, even at Felspar. We have our marble in Georgia and the New England States have a large number of quarries. Indiana has their granite and Minnesota has their granite. I was wondering if your committee gave any thought to that?

Mr. METCALF. We had not testimony on it. It is certainly a matter I know nothing about. It is something I am completely open-minded on, and this committee can well investigate the need for some safety regulations in quarries.

It is in my bill because it is part of this program.

I am chiefly concerned with deep rock mines of the type we have in Butte and safety regulations for that.

Mr. WIER. In your report do you make any résumé of accidents, either death casualties or injuries?

Mr. METCALF. We do not make it in our report. The résumé is contained in the hearings again, and I am sure the staff will be able to find the testimony by the Bureau of Mines and the testimony by the Public Health Service, and testimony by interested union officials.

This is the point, however: The information we have from the reporting activities of the Bureau of Mines is so old, and it takes them such a long time to compile it, that it is practically worthless by the time we get it, and it comes from such varied sources that there is a lack of uniformity that we need in order to actually analyze it and to work out something on the bill.

I believe this additional $250,000 which the Bureau of Mines is getting for that very purpose will be of great benefit to the whole mining industry in the compilation and assembling of more recent information to the benefit of everybody in the mining industry.

Mr. WIER. Might I refer you now, Mr. Metcalf, to my own bailiwick. I understand your committee was up in the northern part of Minnesota there in the iron-range country, both open pit and deep pit.

Mr. METCALF. It was not very deep, Mr. Chairman.

Mr. WIER. They do not go too deep there but there are mines there. What was your finding there on the iron range?

Mr. METCALF. I never have been in a community and in an area and in a region where it was so safety conscious as those people obviously are in that open-pit country. We were there when they were having a meeting of the National Safety Council, and perhaps that accounted for some of it, but their mine-safety record is exceptional; it is really exceptional.

Mr. WIER. Did you get a copy of the Minnesota State law?

Mr. METCALF. Yes, sir. It is a very good State law. But you go across into Michigan and you have this country-inspector system

where a man is elected. He leaves his job in the mine, becomes a mine inspector, if he wins the election, in the same corporation for which he works, and then if he loses the only place he can go back to work is to work on that same job for that same corporation in the mine.

Mr. WIER. What you are saying in reality is that in some areas of mineral mining the method of compliance with any regulations or safety is rather loosely set up because they might take a miner who is on the payroll of the mining company and make him the inspector. Of course, if he wants to go back to work after losing this mine inspection job he is subject to the miners employing him again.

Mr. METCALF. Exactly.

Mr. WIER. So he is not an independent inspector but he relies somewhat upon favoring the company and keeping his standing of employment in good shape. That is the report I have gotten.

Mr. METCALF. That is exactly what I was saying.

Mr. WIER. I said it a little broader than you did. We had that in Minnesota where the mine inspectors were employees of the company, and therefore felt more obligated to the company, and that is long before the union was in effect up there.

Mr. BOSCH. I would assume that you, as a result of your hearings, are convinced that the States have not been able to cope with this subject and therefore the Federal Government must, of necessity, take part in the program.

Mr. METCALF. Some of the States have either not been able to or have not chosen properly to cope with the subject.

Mr. WIER. If there are no further questions here we are very grateful to you, Mr. Metcalf, for apearing here this morning and giving us the results of your committee's activities in this field.

Mr. METCALF. I, too, Mr. Chairman, am very grateful to be able to appear before this committee. I hope at some future time, if you do hold formal hearings, I can present a statement as to the specific needs in my area for the kinds of mines located in Butte and in that area in and around Dillon and those other mining areas.

This is a matter of a great deal of importance to the western district of Montana and all the mining areas in the West.

Thank you, Mr. Chairman.

Mr. WIER. I want you to know you will have every opportunity as we move along.

Congressman Elliott, of Alabama, was not aware that he was to present a statement here this morning on the experience that he has had as a member of this subcommittee.

Due to the fact that Mr. Elliott's State is a very major iron-ore-producing State I have requested him to get some information on the status of mineral-mine inspection in his own State and the reaction he gets as to the necessity for this legislation.

That seems to complete our roster this morning and for the record may I say that the balance of the week is taken up by holidays, which with the operation of several subcommittees of the Labor Committee, of which this is one, makes it mandatory that I work out meeting dates for this committee with the clerk of the committee, Mr. Hussey. There are limitations on the days that some of the committee members

can meet. Therefore, I shall work out with Mr. Hussey a meeting date for sometime the first week in June. It will be subject to call and all members will be notified of the hearings enough in advance to make arrangements to attend.

Is that right, Mr. Hussey?

Mr. HUSSEY. Yes, sir.

Mr. WIER. The meeting will stand adjourned subject to the call of the Chair. Thank you.

(The meeting adjourned at 11:15 a. m.)

MINE SAFETY

(Metallic and Nonmetallic Mines)

THURSDAY, JUNE 20, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON SAFETY AND COMPENSATION
OF THE COMMITTEE IN EDUCATION AND LABOR,
Washington, D. C.

The subcommittee met, pursuant to call, at 10:05 a. m., in room 356, Old House Office Building, Hon. Roy W. Wier (chairman of the subcommittee) presiding.

Present: Representatives Wier and Bosch.

Mr. WIER. It is a few minutes past 10 o'clock, and I will call the meeting to order, because of the fact we are limited as to time. The House is going into session at 11 o'clock, rather than at the usual hour of 12, and I would rather accomplish as much this morning as is possible.

This subcommittee of which I am chairman, has been designated by the full committee, and Chairman Barden to handle several functions of the Federal legislation, and in this case it happens to be mine safety.

I am completing a job that was set up last year when the Education and Labor Committee determined it advisable to take a look at the metallic and nonmetallic safety situation in those States in which metallic and nonmetallic mining is carried on.

The subcommittee will determine whether it is necessary to give some attention to mine safety in the States where the laws may not be either up to par, or uniform with the better laws.

My information is, as a result of that committee which was set up last year, that they found some States in which there were pretty good law enforcements, and other States where it was a little lax.

So, I am completing a job that the Metcalf committee started.

Congressman Metcalf and 2 or 3 others have already appeared before this committee, and put before the committee some of the highlights of their investigations as well as the printed report that is now available.

Congressman Elliott, of Alabama, which State, of course, has its own mines, is also preparing a statement representing the situation in the State of Alabama with regard to metallic mine safety.

There are two agencies of the Government here in the capital, that apparently have an interest in this particular legislation, and the legislation as you all know, consists of four bills that have been introduced.

For your information, I will name those bills at this time.

95122—58——2

H. R. 4111 by Congressman McConnell; H. R. 3639, by Congressman Metcalf; H. R. 3394 by Congressman Kelley, and H. R. 1240 by Congressman Saylor.

In the main, these bills are quite similar, except in one of the bills. It includes quarries.

I am going to ask the Department of Mine Inspection to proceed with its views, information, and reaction, if there are any, to these bills.

No one bill has yet been selected as the working bill. We are trying to find one that will best meet the situation.

So if the gentlemen who are present will give your names, we shall appreciate it.

STATEMENTS OF JOHN A. JOHNSON, CHIEF, DIVISION OF SAFETY; ROBERT H. FLINN, DIVISION OF HEALTH; BUREAU OF MINES, DEPARTMENT OF THE INTERIOR; AND HENRY N. DOYLE, ASSISTANT CHIEF, OCCUPATIONAL HEALTH PROGRAM, PUBLIC HEALTH SERVICE, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Mr. JOHNSON. My name is John A. Johnson, Chief, Division of Safety, Bureau of Mines, Department of the Interior.

Mr. FLINN. My name is Robert H. Flinn, Chief, Division of Health, Bureau of Mines, Department of the Interior.

Mr. DOYLE. My name is Henry N. Doyle, Assistant Chief, occupational health program, Public Health Service, Department of Health, Education, and Welfare.

Mr. WIER. Mr. Johnson, do you have a prepared statement at this time?

Mr. JOHNSON. No, I do not have a prepared statement, sir, but I can say that we have nothing new except that which was offered last year to the Metcalf committee. We have nothing new to offer today.

Mr. WIER. Then, if that is the case, I presume it is in the report?

Mr. JOHNSON. That is correct, sir.

Mr. WIER. If that is the case, for the benefit of this subcommittee, and to bring it up to date, will you review the position of your Department, or the recommendations that you have, so we shall have them in the record. It will show you have made those available to the subcommittee.

Mr. JOHNSON. I think there was a letter sent to Mr. Barden by the Acting Secretary of the Interior, Mr. Chilson, dated April 26, 1957, giving the Department of the Interior's views and recommendations on this bill.

I think a copy of that letter is in the committee's files.

Mr. WIER. That is correct.

Mr. JOHNSON. Do you want me to read that letter?

Mr. WIER. You may present the views of the Department in any way you choose.

Mr. JOHNSON. I can say the letter from Mr. Chilson to Mr. Barden is similar, in fact, practically word for word to a similar report by the Department of the Interior to the previous committee.

Mr. WIER. I presume you are saying that the views of the Department have not changed?

Mr. JOHNSON. That is right, sir.

Mr. WIER. Since the sending of a report to Mr. Barden by your Department concerning these bills?

Mr. JOHNSON. That is correct, sir.

The views of the Department have not changed, and these letters are similar in their recommendations.

I quote from this letter: "We recomemnd that neither bill be enacted." He is referring to H. R. 3394 and H. R. 3639.

Mr. WIER. How about the other two bills?

Mr. JOHNSON. I do not think they were asked to report on the other two. They mention only those two bills in the letters.

Mr. WIER. Would it be safe to assume if they opposed those two bills they would likely oppose the other two bills?

Mr. JOHNSON. I think it would be safe to assume that, because I think the bills are identical.

I have not read them, but from what you said, they are identical bills.

Mr. WIER. I suggest you read the letter in order to make the record clear on the position of the Department of the Interior.

Mr. JOHNSON. This letter is dated April 26, 1957. It is headed "United States Department of the Interior, Office of the Secretary, Washington, D. C.," and reads:

DEAR MR. BARDEN: This responds to your request for the views of this Department on H. R. 3394 and H. R. 3639, identical bills relating to certain inspections and investigations in metallic and nonmetallic mine quarries (excluding coal and lignite mines) for the purpose of obtaining information relating to health and safety conditions, accidents, and occupational diseases therein, and for other purposes.

We recommend that neither bill be enacted.

The bills are patterned after the act of May 7, 1941 (55 Stat. 177), which preceded the Federal Coal Mine Safety Act of July 16, 1952 (66 Stat. 692; 30 U. S. C., secs. 471–483), pertaining to inspection of coal mines. In fact, the act of May 7, 1941, is incorporated as title I of the latter. Like the act of May 7, 1941, H. R. 3394 and H. R. 3639 contain no powers of enforcement. Compliance with recommendations evolving from inspections would be purely voluntary. The only compulsory aspects of the bills are the right of entry to make inspections and requiring the companies to report all accidents involving loss of life or bodily injury.

Available records show that both the frequency and severity rates of accidents occurring in metallic and nonmetallic mines and quarries are considerably lower than those of coal mines. Moreover, the record of major disasters (single accidents in which five or more persons are killed occurring in noncoal mines and quaries is much better than the record of coal mines. The principal causes of major disasters in coal mines have been explosions of gas and coal dust (except anthracite dust which is nonexplosive), and fires. The principal causes of major disasters in metallic and nonmetallic mines have been fires and inrushes of impounded water, whereas disasters in quarries have been caused principally by slides of ground and blasting. The foregoing is cited to show that the conditions leading to the adoption of legislation authorizing Federal inspection of coal mines do not exist to the same degree for metallic and nonmetallic mines and quarries.

It would be extremely difficult to prepare a uniform code or set of standards to cover all conditions and practices encountered in metallic and nonmetallic mines and quarries. Mining in such facilities is carried out under an extremely wide variety of conditions and practices, and reasonable standards and rules pertaining to health and safety conditions could be applied only in the broadest sense. This Department is of the opinion that the administration and regulation of safety practices with respect to metallic and nonmetallic mines and quarries, therefore, become a problem primarily of local concern.

We believe that the Federal Government should continue the types of activities now carried on by the Bureau of Mines with respect to health and safety conditions in metallic and nonmetallic mines and quarries. Such activities include

accident-prevention courses for workmen and officials, assistance at disasters, investigation of disasters and unusual accidents, safety inspections at the request of companies, training in first aid, training in use of respiratory-protective equipment, dust and ventilation surveys, and publication of material on various aspects of health and safety, including accident statistics and analysis. There is evidence that these educational and safety-promotional activities have contributed to improve health and safety conditions in metallic and nonmetallic mines and quarries. This Department, therefore, believes that intensified effort should be directed along these lines if added appropriations should become available for such purposes. In addition, we would favor the initiation of a cooperative program between Federal and State agencies which would provide for grants to States for the development of industrial accident prevention programs at the local level, thereby avoiding the necessity for extending the inspection services of the Federal Government.

The Bureau of the Budget has advised that there is no objection to the presentation of this report to your committee.

And the letter is signed "Hatfield Chilson, Acting Secretary of the Interior."

Mr. WIER. Mr. Johnson, is that the end of the letter?

Mr. JOHNSON. Yes, sir.

Mr. WIER. Does your Department have accident and safety records of the various States and possessions over which you have jurisdiction?

Mr. JOHNSON. I am sorry, sir, but I do not quite get your question.

Mr. WIER. I asked, does your Department have jurisdiction now over coal mines in the 48 States and possessions, and do you have any records, statistics, dealing with accidents and safety as you have found in metallic or nonmetallic mines?

Mr. JOHNSON. Yes; we have several tables in the report of Mr. Metcalf's committee giving accident statistics on the various groups, such as metallic mines, nonmetallic mines, quarries, and also coal mines.

Mr. WIER. I have one more question.

Your opposition to this legislation which, of course, would include all four bills, is based on the views that the States have fairly good control over mine safety in the metallic and nonmetallic mines. Is that correct?

Mr. JOHNSON. That is correct.

Also, the way I read the letter, the Department has the view that we could help them improve where necessary, serving in an advisory capacity to the various State departments of mines.

Mr. WIER. You mean your Department could help the States?

Mr. JOHNSON. That is correct.

Mr. WIER. Is there any opposition in your Department due to setting up the machinery in connection with your mine safety laws now that would affect your Department in the operation of Federal participation, and that which is now in the Federal coal mine participation? I think they wrote that into the law.

Mr. JOHNSON. Yes.

In fact, right now in our coal mine inspection activities in several States, we have the joint agreement with the State inspectors in those States, and Federal inspectors work together in inspecting the mines. I do not know how many States, but I would say between 6 to 10 States in which that joint agreement is working, where the Bureau of Mines is making those inspections for coal mines at this time.

Mr. WIER. That is your reply to the fact that in this report, the Metcalf committee report, the committee finds the laws of the various

States quite different, and lacking laws in some, whereas in others they have very good regulations?

Mr. JOHNSON. I think that is true; I don't know why, but I found that was my experience that some of the States have very good mining laws, and some of the laws are outmoded. Some of those laws were written years ago and have not been kept up to date.

Mr. WIER. What is your recommendation of bringing the more lax up to the uniform standards of those which we think are good laws?

Mr. JOHNSON. I think that is why this one statement in the letter, the last sentence, next to the last paragraph, which states:

> In addition, we would favor the initiation of a cooperative program between Federal and State agencies which would provide for grants to States for the development of industrial accident-prevention programs at the local level, thereby avoiding the necessity for extending the inspection services of the Federal Government.

Does that answer your question?

Mr. WIER. Does that mean your Department favors a grant or contribution to various mining States to assist them?

Mr. JOHNSON. That is the way I read that; I think that is the idea.

Mr. WIER. Mr. Bosch, do you want to ask any questions?

Mr. BOSCH. Yes.

Why should that be necessary if the States have been able to handle the proposition, as your letter would indicate, quite satisfactorily? Why is there compulsion that the Government should bring itself into this picture? Why volunteer to bring the Government into another activity if the States have been handling it, as you indicated in your letter, quite satisfactorily?

Mr. JOHNSON. I do not know if I can answer that question, Mr. Bosch.

I am reading from the Department's report.

Mr. WIER. Can you not give your own views?

Mr. JOHNSON. I can give my own views.

I have found in some States they have been very willing to revise their mining laws and bring them up to date and keep them up to date, and occasionally they have asked us to bring them up to date, which we have done. Other States have not done that, and why, I cannot say. We are always willing to help any of the States in revising their mining laws, in bringing them up to date, cooperating in any accident-prevention program, helping them set up such a program. However, I must say we do not take the initiative. But we always tell them we are willing to help them in any way.

Mr. BOSCH. Let me say this, Mr. Johnson: I think the statement in the letter you have read is very clear on the position of the Bureau with respect to this legislation, but I just cannot understand why it should come forward with the suggestion that the Federal Government should give grants in aid to improve the State systems.

Mr. JOHNSON. My personal opinion—this is not the Department's opinion—but my personal opinion is that I do not think it should be necessary.

Mr. BOSCH. That is all.

Mr. WIER. Let me ask you this question. How closely are you acquainted with the operation of safety and mine inspection in these so-called mining States, whether they are open pits or whether they are underground; do you have considerable knowledge of them?

Mr. JOHNSON. Yes, I worked in Michigan, Minnesota, Montana, and I have and I am familiar with the way those States do it, and I have visited several other States.

In Michigan the inspections for the State are carried on by county mine inspectors, and they are elected for 2-year terms.

Mr. WIER. And elected by whom?

Mr. JOHNSON. By the people; in other words, a county election.

In Minnesota the county mine inspector is appointed by the board of county commissioners or supervisors, and they may serve at the pleasure of that committee or board, as long as that board sees fit. They are not elected by the people.

In Montana, I think the State inspectors are appointed by an industrial license board to serve at the pleasure of that board.

I am not familiar with Alabama or New York, but I think in New York State, the State inspectors——

Mr. WIER. Have you had any occasion to find that in some localities, counties or States that the mining companies or mining corporations, mining units, have in any way controlled these mine inspectors or mine inspections so that the mine inspectors are not too independent of any pressure, or duress on the job of inspection?

Mr. JOHNSON. No; I would not say that. The only thing I could add to that is, you are getting the type of man you pay for; in other words, the type of man you could get as county or State inspector would depend upon how much salary he is being paid.

One more thing I could add, in Michigan the county inspectors are elected for 2-year terms, and they have to go back and work in the mines to support themselves if they lose out in the next election; so, they may feel as though they want to be fair, and not stick their necks out.

I do not think I have ever seen at any time where pressure was put on by the mining companies. I have never seen them put pressure on.

Mr. WIER. Let me divert to the quarry situation, and that is something I know nothing about. I am acquainted with the mine inspections; we have some of the largest mines in the Nation in Minnesota.

What is your experience with quarry mining? That is included in one of these bills.

Mr. JOHNSON. In some States, the county mine inspector or State mine inspector will cover quarries also, but I think in most States that I have been in they have so few State mine inspectors or county mine inspectors that they cannot spend too much time in the quarries. In other words, they are trying to take care of the underground mines and the large open pit mines, and they also go to quarries if they have time, and if there is a need to get in there.

I do think they cover about as much ground as they can cover with the number of inspectors they have. I also think that the number of accidents are not as high in the quarries as in the mines in most cases.

Mr. WIER. And here again I presume your agency's recommendation is non-Federal inspection of quarries?

Mr. JOHNSON. That is correct; the same as metallic and nonmetallic mines.

Mr. WIER. We have a member of the Committee on Education and Labor present, and he is going to make a statement, which we will hold

up for the time being. I wonder if Congressman Elliott, of Alabama, desires to ask any questions of these people?

Mr. ELLIOTT. No, I do not think so.

Mr. WIER. Do you have any more questions, Mr. Bosch?

Mr. BOSCH. Mr. Johnson, could you give us any idea as to a comparison of the accident rate in this industry as compared to the accident rate in other industries in the United States?

Mr. JOHNSON. Yes. I have that information here, in the report by the Metcalf committee, on page 277. There is a table which gives the frequency rate for two different periods; the first period is from 1945 through 1949 and the second period is from 1950 through 1954.

I will read this.

The frequency rates being the number of accidents per million man-hours of work—I will read the rates for the various industries, starting from the top down:

Stone quarrying, 24.2; trucking, local and long-distance, 34.6; heavy construction, 34.8; nonmetallic minerals mining, 42.1; metal mining, 42.2; highway and steel construction, 43.0; sawmills and planing mills, 47.5; coal mining, 50.86; stevedoring, 78.2; and logging, 87.7.

I might say those are the frequency rates for 1953–54.

Mr. BOSCH. Have you any breakdown as to the number of hours lost by employees with regard to the various industries?

Mr. JOHNSON. No, sir; I do not have that information.

Mr. BOSCH. Mr. Johnson, where could we get that information?

Mr. JOHNSON. The table I just read to you—a few of those items are taken from our reports, but a majority of them are taken from the Bureau of Labor Statistics.

I think you could get such a report from the Bureau of Labor Statistics, giving you information from all of the industries.

Mr. BOSCH. One more question, Mr. Chairman.

Mr. WIER. Yes. Certainly.

Mr. BOSCH. Mr. Johnson, in your experience in the field, what would you say the relationship is between labor and management in regard to safety regulations? Have they been able to work this out together?

Mr. JOHNSON. From my personal experience, and I have spent 15 years in the lake district, the relations there were excellent. The mining companies each have a lifesaving department, and inspect their own lines. The labor unions there have committees that go around with the company inspectors, and if the labor committee see any hazardous conditions during the inspection, they can report it and get action.

Mr. BOSCH. Thank you.

Mr. WIER. Mr. Johnson, does your associate have anything to add at this time?

Dr. FLINN. Yes, Mr. Chairman. I have the working agreement for the joint health studies between the Bureau of Mines and the United States Public Health Service, which I would like to submit for the record at this time.

Mr. WIER. The document will be received and made part of the record.

(The document referred to follows:)

MEMORANDUM OF UNDERSTANDING FOR COOPERATIVE ACTIVITY IN THE FIELD OF INDUSTRIAL HYGIENE IN THE MINERAL INDUSTRIES BETWEEN THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE (PUBLIC HEALTH SERVICE) AND THE DEPARTMENT OF THE INTERIOR (BUREAU OF MINES)

The Public Health Service and the Bureau of Mines hereby agree to this Memorandum of Understanding as a basis for cooperative activity to achieve increased protection of health and safety through the investigation, control and prevention of industrial health hazards in the mineral industries and in connection with the mining, preparation, treatment and utilization of minerals and the products thereof, and through furnishing assistance in industrial hygiene, health and safety to those State and local organizations engaged in protecting workers against health and safety hazards in the mineral industries.

1. Outline of existing activities of the Public Health Service and the Bureau of Mines

(*a*) The Public Health Service conducts investigations in industry for the purpose of measuring existing health hazards and determining methods of controlling and, where possible, eliminating these hazards. Information thus obtained is available to State agencies for their use in administering laws, and enforcing rules and regulations, designed to prevent and control industrial health hazards. The Public Health Service, through consultative services, also assists the several States in formulating programs for health protection in industry, and through grants-in-aid, extends financial assistance for the creation and maintenance of industrial hygiene programs.

(*b*) The Bureau of Mines, among other things, conducts investigations with a view to improving health and safety in the mineral industries. The information thus obtained is published and widely disseminated among workers and operators and is available to Federal, State, and local governments for use in administering and enforcing laws and regulations relating to health and safety in the industries thus investigated. The Bureau of Mines also maintains safety stations and equipment in the various mineral regions of the United States and Alaska for the purpose of giving instruction and training on safety and health and making inspections and investigations in mines, and for giving aid in mine disasters. Engineering studies, research, and tests pertaining to health and safety of workers in the mineral industries are conducted by the Bureau of Mines in the field, and at several of the many research installations of the Bureau located at appropriate centers in the mineral industries. These investigations relate to the determination and abatement of harmful gases and dusts, and the reduction of hazards from inadequate ventilation, the use of explosives, electricity, and mechanical appliances in mining and related industries.

2. Outline of cooperative functions under this Memorandum of Understanding

It is agreed, therefore, that subject to applicable statutes and available appropriations, the following shall be the basis for the cooperative efforts of the Public Health Service and the Bureau of Mines under this Memorandum of Understanding to achieve their objective of increasing the protection of the health of workers in the mineral industries:

(*a*) Cooperative functions of the Public Health Service under this agreement:

(1) To conduct in cooperation with the Bureau of Mines broad field studies embracing the various epidemiological phases necessary for an evaluation of conditions suspected of causing occupational diseases in the mineral industries. Such studies will include medical examinations of workers, statistical surveys, and studies of working environment.

(2) To conduct laboratory studies on the toxicity or physiological effects of minerals, mineral products, or substances encountered in the mineral industries, for the purpose of supplementing field investigations on the health of workers in the mineral industries. The Public Health Service will, on request of the Bureau of Mines, furnish to the Bureau information on the result of such studies. The Public Health Service, at the request of the Bureau of Mines, also will make studies of the physiological effects of specific substances submitted by the Bureau and/or assign qualified personnel to conduct such investigations in the Bureau of Mines Laboratories.

(*b*) Cooperative functions of the Bureau of Mines under this agreement:

(1) To conduct in cooperation with the Public Health Service broad studies of the health problems in the mineral industries; such studies embracing the chemical, physical, and engineering phases of health problems which the Bureau of Mines and the Public Health Service have agreed should be investigated.

(2) To conduct laboratory studies in the chemical, engineering, and physical phases of field investigations pertaining to the health of workers in the mineral industries.

(3) To cooperate with the proper State agencies in promoting the application of the results of the studies of the health of workers in the mineral industries made by the Public Health Service and the Bureau for the purpose of controlling and preventing health hazards in these industries.

(4) To test equipment for permissibility and develop methods for control of health hazards in the mineral industries.

(*c*) The Bureau of Mines and the Public Health Service shall work in close cooperation according to the foregoing statement of existing and developing relationships in a united effort to stimulate interest and action on the part of State agencies and others concerned with the protection of the workers in the mineral industries.

(*d*) Manuscripts reporting the results of cooperative activities under this Memorandum of Understanding will be published by consent of both parties.

3. As used in this Memorandum of Understanding, the term "Mineral industries" covers all operations relating to the mining, preparation, treatment and utilization of minerals and the products thereof.

4. This Memorandum of Understanding supersedes the "Memorandum of Understanding for Cooperative Activity in the Field of Industrial Hygiene in the Mineral Industries between the Federal Security Agency, Public Health Service and the Department of the Interior, Bureau of Mines," approved in 1951. This Memorandum of Understanding shall terminate at the end of five years from the date of final approval hereof, but may be terminated by either party at any time prior thereto upon 30 days' written notice to the other party.

LEROY E. BURNEY,
Surgeon General, Public Health Service.
MARLING J. ANKENY,
Director, Bureau of Mines.

Approved:

HEROLD C. HUNT,
Secretary of Health, Education, and Welfare.

October 3, 1956.

FRED E. SEATON,
Secretary of the Interior.

November 8, 1956.

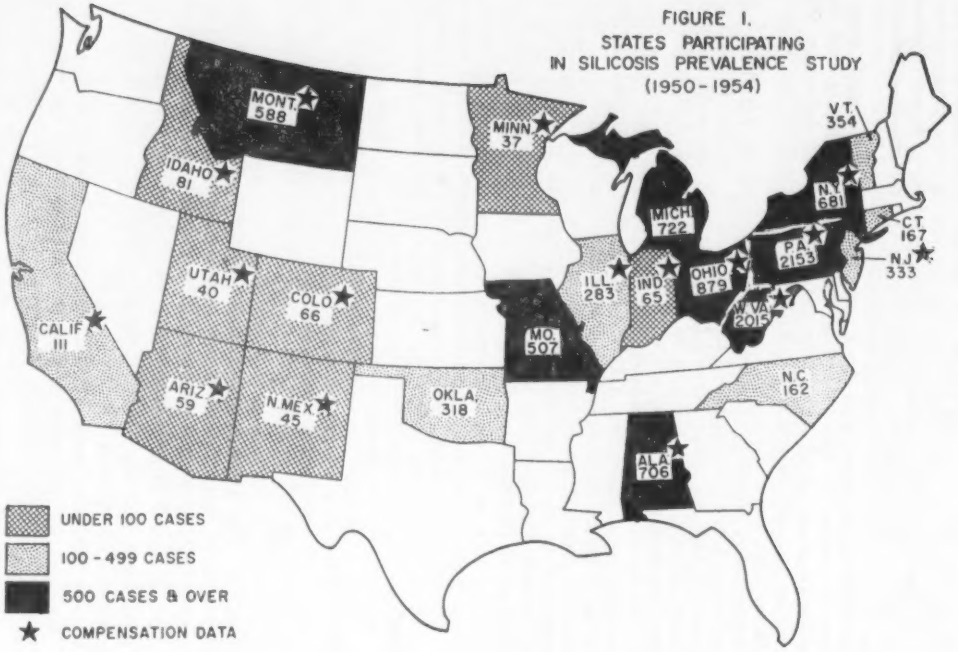
Dr. FLINN. We have a reprint on silicosis research by Mr. Doyle here, and myself, and it was prepared for the American Mining Congress meeting last year. The results in this paper were discussed before the Metcalf committee, and we supplied the committee with a draft of this paper. We have the finished, public reprint now, if your committee would like to have it.

Mr. WIER. Yes, we would like to have copies of it.

The reprint on silicosis research, as prepared by Mr. Henry N. Doyle, Public Health Service, and Dr. Robert H. Flinn, Division of Health, Bureau of Mines, will be made a part of the record at this point.

(The reprint referred to follows:)

FIGURE 1.
STATES PARTICIPATING
IN SILICOSIS PREVALENCE STUDY
(1950-1954)



[Reprinted from Mining Congress Journal, April 1957]

SILICOSIS RESEARCH

Some Recent Developments in the Prevention and Control of Silicosis, an Occupational Disease That Continues To Be a Problem of Industrial, Social, and Economic Significance

(By Henry N. Doyle, Public Health Service, United States Department of Health, Education, and Welfare and Robert H. Flinn, M. D., Division of Health, United States Bureau of Mines[1])

Silicosis means a pathologic condition of the lungs caused by breathing significant amounts of free silica dust over varying periods of time. There are four relevant factors so far as the causative agent is concerned; namely, number of dust particles per unit volume of air, particle size of the dust, mineral composition of the dust, and length of time the worker is exposed to the dust. In this disease there is general replacement of the normal elastic tissue of the lungs by unyielding, inelastic fibrous tissue, which causes shortness of breath, decrease in lung expansion, and in increased susceptibility to tuberculosis.

RESULTS OF EARLY STUDIES

The Public Health Service and the Bureau of Mines have long been concerned with the silicosis problem. Their interest dates back to 1914 when they made a joint investigation of silicosis in the tri-State area of Oklahoma, Kansas, and Missouri. In the 1920's and 1930's, they carried out a series of investigations in the dusty trades which have contributed basic data both on the pathology of silicosis and on the control of hazardous exposures. These studies help to define the role of such factors as dust concentration, particle size, composition of the dust, and duration of exposure and led ultimately to the adoption of 5 million particles per cubic foot of air as a maximum allowable concentration for crystalline silica dust.

There have been few fundamental changes in the concept of the epidemiology of silicosis since the performance of these field studies of the Public Health Service and the Bureau of Mines and the laboratory investigations at the Saranac Laboratory for the Study of Tuberculosis, Saranac Lake, N. Y. These studies led to the general conclusion that silicosis results from the inhalation of crystalline silica in particulate form for prolonged periods of time and that the rapidity and extent of development are in general directly related to the number of particles in the size ranges which enter the lungs and are retained—namely, those from 0.5 to about 4 microns in diameter. Concentrations of such dust below 5 million particles per cubic foot of air are rarely associated with the development of disabling silicosis. Striking reductions in the incidence of silicosis have resulted from acceptance of these principles and their use in the design and followup of control measures.

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Dr. Robert H. Flinn has been with the Public Health Service since 1931. From 1936 to 1942, while stationed at the National Institutes of Health, Bethesda, Md., he conducted a series of field investigations. These included studies of lead poisoning and silicosis among West Virginia pottery workers, lead poisoning in storage-battery plants, manganese poisoning in ore-crushing mills, anthraco-silicosis in Utah bituminous-coal mines, health hazards among smelter workers, chronic mercurialism among hatters and laboratory workers, and compressed air illness in tunnel construction.

Dr. Flinn also worked with the Maryland State Health Department to develop an industrial-hygiene program. He holds the Army Commendation Ribbon for his work on industrial health problems during assignment to the Safety and Security Division, Army Ordnance Department, in 1942–45.

In May 1955 he was appointed chief of the Division of Health of the Bureau of Mines, on a 2-year detail from the U. S. Public Health Service. As chief, Dr. Flinn assists in formulating programs and basic policies with regard to health in the mineral industries and directing research designed to minimize health hazards peculiar to those industries.

However, despite the enormous amount of research that has been done throughout the world on the subject of silicosis, the nature of the action of the silica particle upon pulmonary tissue is not known; that is, the mechanism by which silica produces fibrosis. Nor is it known why the silicotic is more susceptible to tuberculosis than the normal person.

ARE PRESENT CONTROLS ADEQUATE?

The uncertainty in these medical areas carries over into the field of engineering controls, and today we find ourselves taking stock and wondering whether the accepted techniques for the prevention of silicosis are in reality totally adequate.

Twenty years have now elapsed since the introduction of widespread dust-control programs by the larger mining and industrial companies, yet silicosis cases still occur. Are these cases the result of precontrol exposures, in view of the long latent period for the development of silicosis? Are they accounted for by the failure to apply controls universally? Or are they occurring because of the inadequacy of present standards? To help answer these questions, the Public Health Service recently undertook statistical research on the prevalence of silicosis. Only cases diagnosed as silicosis were tabulated. The following data did not include other types of pneumoconiosis diagnosed as being caused by dusts other than free silica.

PREVALENCE OF SILICOSIS

Covering the 5-year period, 1950–54, the study found 10,362 cases of silicosis that have been compensated or reported in one form or another in the 22 States illustrated in figure 1. These States were selected because of the availability of information and because it was known that silicosis is or had been a problem in these States. If cases processed by compensation agencies but for various reasons denied benefits are added, the total exceeds 13,000.

Of the 10,362 silicotics recorded during this period, about 20 percent were dead; 50 percent were totally disabled; and 30 percent were still working, seeking work, or of an unknown status.

Because of the difficulties surrounding the gathering of these data and because of the limitations inherent in the records themselves, we have good cause to believe that the 10,362 cases are an underestimate of the actual situation. Nonetheless, one cannot deny that 10,362 cases, limited to 22 States, are a sizable number, even if spread out over a 5-year period.

The data reveal that these cases represent primarily an older group, three-fourths of the cases uncovered being in individuals over 50 years of age. This finding, within limitations imposed by the data, supports the current opinion that many of the cases of silicosis coming to light at the present time represents a residue of old cases. However, these data also show that silicosis is occurring among young men with recent exposures.

ASSOCIATED WITH MANY INDUSTRIES

Table 1 gives the industry in which the silicotic was employed at the time the case was reported. Since 2 States did not have this information, the table is an analysis of 10,152 cases from 20 States. This is a numerical distribution of the cases and does not relate the cases to the population at risk. Therefore, the data cannot be used to compare the silicosis hazards between the various industries. You will note that the mining industries produced 6,755, or two-thirds, of these cases. Coal mining, including both soft and hard, ranked highest with 4,079; metal mining followed with 1,637. There were 854 cases for which the type of mining was mixed or was not specified. Drillers, muckers, shovelers, and machinemen were the most commonly mentioned specific occupations. Another 185 cases were associated with the extraction and milling of nonmetallic minerals such as clay, feldspar, and mica, and in tunneling and quarrying operations.

These facts indicate that silicosis is still associated with a wide variety of industries, and, if the occurrence of silicosis among young men can be regarded as a criterion, no industry can take credit for complete dust control.

TABLE 1.—*Silicosis cases by type of industry based on 10,152 cases in 20 States during 1950–54*

Industry	Number of cases	Percent of cases
Mining:		
Coal	4,079	40.2
Metal	1,637	16.1
Mixed and unspecified	854	8.4
Nonmetallic and quarrying	185	1.8
Total, mining	6,755	66.6
Manufacturing:		
Foundries	1,645	16.2
Other manufacturing	1,159	11.4
Total—manufacturing	2,804	27.6
All other and not known	593	5.8
Total	10,152	100.0

NEW CASES

To determine more precisely whether a significant number of new cases are developing among workers entering dusty trades for the first time in the past 20 years, we analyzed 3,455 cases in 10 States for which reasonably adequate employment histories were obtained. Of this number, 344 workers, or 10 percent, allegedly received their entire dust exposure after 1935, sometime during the past 20 years.

The distribution of the 344 cases, by industries, is shown in table 2. The two groups with the largest proportion of cases receiving total dust exposure in the past 20 years were nonmetallic mineral industries with 32 percent and nonmetallic mining and quarrying with 21 percent. Cases were found with less than 5 years of exposure; but, in general, the exposure period averaged about 15 years.

TABLE 2.—*Silicosis cases receiving dust exposure after 1935, based on 3,455 cases in 10 States during 1950–54*

Industrial group	Number of cases reported	Cases receiving dust exposure after 1935	
		Number	Percent
Mining:			
Metal	509	80	16
Coal	1,095	77	7
Mixed or unspecified	65	7	11
Nonmetallic and quarrying	146	31	21
Manufacturing:			
Foundries	888	85	10
Other manufacturing	662	56	8
All other, or not known	90		
Total	3,455	344	10

Preliminary tabulation of data collected on 2,746 cases in 11 States for which tuberculosis was recorded when present, shows that 35 percent also had tuberculosis. It was diagnosed in 33 percent of the 1,763 persons who were alive at the time of the latest record. Forty-nine percent of the 983 individuals who had died during the study period were found to have tuberculosis as well as silicosis.

STILL A SERIOUS PROBLEM

The conclusion derived from limited statistical study is that silicosis continues to be an occupational disease of considerable importance. From the standpoint of dust control, the silicosis problem appears to be more prevalent in those men who had their initial exposure before 1935. Enough evidence was uncovered to suggest that either the application of dust control measures is not universal or that other factors such as the adequacy of our present standards, the influence

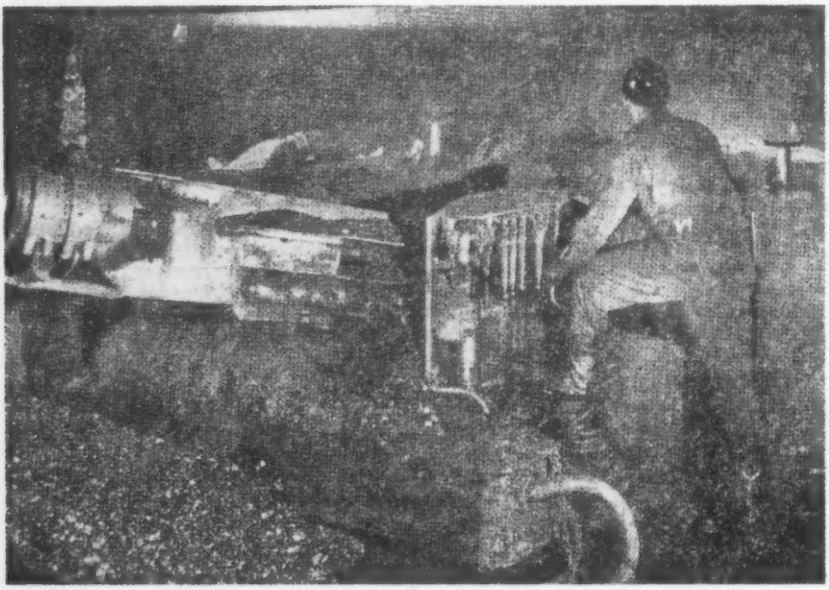
of the particle size and the actual toxicity of various forms of silica, are involved. This fact is evidence since silicosis is developing among younger men with recent and short exposure to dust. In addition, we must consider that, with less severe exposures, silicosis may take longer to develop than in the past, a possibility that cannot be determined for some years.

The findings also suggest that silicosis is a serious social and economic problem. Over the past 5 years the number of compensation claims for silicosis has been increasing. Liberalization of compensation laws and improved diagnoses have undoubtedly influenced this situation. Moreover the silicotic is living longer. Medical progress in general and the gradual adoption of preventive control measures, which have minimized the severity of exposures among men continuing in dusty occupations, have probably contributed to the longevity of the silicotic. The result is that the number of older people becoming eligible for benefits through workmen's compensation or other means is rising.

This inquiry into the prevalence of silicosis has revealed, among other things, the need for better reporting of facts on diagnosed cases of silicosis, uniform classification of diagnostic terminology, criteria of disability, and standards for the supervised employment of nondisabled silicotics. In the absence of previous prevalence data of any kind on silicosis in the United States, it is hoped that the final report on this study, now being prepared, will provide a base line for future evaluations of the occurrence of silicosis.

CLASSIFICATION OF CHEST X-RAYS

Since it appears that silicosis will continue to be a problem of industrial, social, and economic significance for many years to come, the efforts of medical investigators to prevent and treat this disease assume greater significance.



Twenty years have elapsed since the introduction of widespread dust-control programs by the larger mining and industrial companies, yet silicosis cases still occur

A notable achievement of the past few years has been the development of a system of classification of chest X-rays in pneumoconiosis which is enjoying the interest of industrial physicians, radiologists, and pathologists. The system was accepted by the International Conference of Experts on Pneumoconiosis of the International Labor Organization at Sydney, Australia, in 1950 and is presently being used in Great Britain, France, and Germany.

This system permits uniform differentiation of the various stages of silicosis and other dust diseases included among the pneumoconiosis. Thus, the classification of "simple pneumoconiosis" has three defined categories of increasing abnormality, based on the appearance of the roentgenograms of the diseased lung. The classification of "complicated pneumoconiosis" has four categories of increasing abnormality of the film.

This development marks a step forward toward the better understanding of the silicosis problem among investigators in this field. The absence of a standard classification has long been a barrier to the communication and comparison of findings among different investigative groups.

It should be noted that a diagnosis of silicosis cannot be made by chest X-ray alone, but this does not detract from the value of the X-ray as a diagnostic aid. All it means is that, on the X-ray film, other conditions may simulate certain stages of silicosis. Thus, siderosis (from inhaling iron oxide), baritosis, and sarcoid and even military tuberculosis may sometimes resemble stages of silicosis. Nevertheless, the chest film provides for the diagnosis of silicosis the most valuable evidence we have (other than lung biopsy, which cannot be widely applied). Like other evidence in medicine, it must be considered with the patient's history, physical findings, and laboratory studies before a final diagnosis is attempted. A characteristic chest film in a person who has been exposed to silica is very strong evidence for silicosis. The development of changes in serial films during a period of exposure is particularly convincing. It is quite another thing, however, to estimate from the X-ray film alterations in lung function or pulmonary disability.

Numerous studies have shown that the earliest recognizable form of silicosis, generally classified as simple discrete nodular silicosis, is attended either by no recognizable alterations of function or by very silght ones. It is possible that slight alterations of function are not recognized since, to date, all studies in diseased persons have been made after the disease has become manifest. Thus, we can only compare the lung function measurements of the diseased person with those of the so-called average normal man. Possibly, a study of persons early in life, prior to the development of the disease, with repeated studies when the disease is fully developed, would show some reduction in respiratory function. In the advanced stages of silicosis, known as conglomerate silicosis or progressive massive fibrosis, recognizable alterations of pulmonary function are usually found readily. They include reduction of the maximum breathing capacity and an increase in the residual volume, which changes interfere with full, free inhalation and exhalation. The oxygen ventilation equivalent may also be slightly above normal. Thus, the diseased person may find it necessary to breathe more air per minute than the normal person in response to physical exercise.

EARLY DETECTION OF SILICOSIS SUSCEPTIBILITY

An inherent limitation of the use of the X-ray in the prevention of silicosis is that the disease has already started before the symptoms are discernible on the chest film. Another tool is therefore needed to detect those individuals that are more likely to develop silicosis early. Such individuals could then be removed from further dust exposure before irreversible changes occur.

It is possible to measure the volume of air contained in the lungs in their fully expanded state (total volume) and also in the state of being as empty as one can make them by voluntary effort (residual volume), the difference between these two volumes being the stroke value (vital capacity) of the respiratory pump. The maximum rate at which the respiratory apparatus can move air into and out of the lungs in repeated cycles (maximum breathing capacity) can also be measured.

A recent study has revealed that spirogram tracings of the three-second timed vital capacity and the maximal breathing capacity are useful screening tests of pulmonary function to detect early function abnormalities, even before subjective or roentgenologic changes are apparent. They have also been demonstrated to be suitable tests for annual or preemployment examinations to detect susceptible or poor risk individuals who may be exposed to environmental lung irritants in their work. These spirograms are reported to be cheap to run, rapid in measurement, requiring only 5 minutes, and easy and simple to obtain for permanent records. It is further reported that the reliability of the spirogram data has been well correlated with complete pulmonary function studies on a large series of cases with all degrees of pulmonary function impairment,

and a wide spread of values has been shown between the normal and the most abnormal.

ALUMINUM THERAPY

While efforts continue toward the prevention of silicosis through medical and enginering control measures, we must necessarily also be concerned with the development of effective treatment methods. Since 1939, when a group of investigators at the University of Toronto published the results of a series of experiments dealing with the action of the fine aluminum particles on the action of silica and their toxic reaction on body tissues, considerable work has been done with aluminum therapy. The Toronto investigators demonstrated that mixtures of quartz and aluminum dust in the inspired air of cage animals did not produce silicotic nodules after a length of exposure several times that required for quartz particles alone; also, that animals exposed alternately to quartz and aluminum particles did not develop silicosis. The effectiveness of aluminum therapy for human beings, however, remains a controversial question, and its use in the United States is limited. Also, its use has not been endorsed by the Councils on Industrial Health and Pharmacy and Chemistry of the American Medical Association who suggested further research. However, at the McIntyre-Saranac Conference of 1955, two American authors reported favorably on its preventive and therapeutic properties, but it is difficult to determine what influence dust control may have had in the reduction of the incidence of silicosis.

INFLUENCE OF DUST CONTROL

The value of dust control in preventing silicosis has been clearly demonstrated in a recent study by the Public Health Service and the Vermont Department of Health. This study sought to determine the effectiveness of the control measures that had been established as the result of a study of the granite cutting sheds made by the Public Health Service in 1923. This earlier study had revealed a universal occurrence of silicosis in those workers exposed to concentrations above 40 million particiles per cubic feet, the disease proving almost invariably fatal within a short time after onset. Between the years 1935 and 1937 practically the entire Vermont granite-cutting industry adopted dust-control measures. A study made during the summer of 1956 indicated that few exposures in the industry exceeded 5 million particles per cubic feet. The Vermont Department of Health has provided annual X-ray examinations of the workers since 1935. It is interesting to note that, within the limitations of the X-ray equipment used, not a single case of silicosis has been diagnosed in a granite shed worker whose initial exposure followed the installation of dust controls. This is the only known example of a silicosis-producing industry in the United States in which it appears that no new cases of silicosis are developing.

FUTURE EFFORTS

While various facets of the silicosis problem are under study by different investigators, we must not overlook the importance of reporting cases of this disease, together with other occupational diseases. Only by learning more about where, when, and under what conditions cases of silicosis are occurring, can we effectively direct our efforts to its prevention and control. If the mining industry were to support wholeheartedly and work for the improvement of occupational disease-reporting practices it would be making a sizable contribution to the solution of a vexing problem that otherwise will continue for a long time to come. Meanwhile efforts should be made to strengthen the dust-control program and to provide adequate medical supervision and periodic physical examinations for our vital mining population.

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Mr. WIER. Off the record.

(Discussion off the record.)

Mr. WIER. Mr. Bosch, do you have any further questions?

Mr. BOSCH. No, sir, not at this time.

Mr. WIER. Mr. Johnson, are you finished, now, as far as your Department is concerned, in expressing the views of the Department? I assume you are reluctant to support these bills for Federal inspections, except as required or requested.

Mr. JOHNSON. That is correct.

Also, we feel that with additional funds, our educational staff, educational programs could be expanded and it would help a lot.

Mr. WIER. Where would that be best accomplished, in your opinion?

Mr. JOHNSON. If we could go out and put on an extended program, extended classes for the workingmen and supervisors, and educate them to the hazards, I think we could do a lot of good. We are doing some of it now, but our staff is limited. That was discussed with the Metcalf committee, and it was also discussed in this letter from the Department which I read.

Mr. BOSCH. I would like to make the observation, Mr. Johnson, that I, for one, do not believe the Bureau should be expanded for experimental purposes. I think if this legislation has merit, it should stand on its own feet. If the States are able to do the job, they should do it. The Federal Government should not get into this field any more than it is now.

I think you have done a good job the way it is set up at the present time, and I cannot see burdening the taxpayer with any additional moneys for experimental purposes.

Mr. WIER. In connection with that statement by Congressman Bosch, if you were to take over the Federal participation without too much authority in the field of metallic and nonmetallic mining, how many men or inspectors would you anticipate would be necessary to cover the States and Territories where mining is going on?

Mr. JOHNSON. I made a study of that for the Metcalf committee, and my judgment, from my experience in the field, we would need

about 200 inspectors in order to make one inspection a year of each metallic mine and each nonmetallic mine, and each quarry and the related plants, such as your smelters and washing plants that go along with it, and there would be 200 fieldmen which we would call inspectors. They would have to be mostly engineers. We would need an additional staff of probably 50 people—clerks, supervisors, and a few specialists.

Mr. WIER. How many inspectors do you have in the coal inspection activity?

Mr. JOHNSON. I do not know exactly, but I think there are about 300—275 inspectors, but that is not counting clerks, and so forth.

Mr. WIER. Then you put metallic mining on about the same basis as you put coal mining?

Mr. JOHNSON. Yes, sir.

Mr. BOSCH. What would that mean in dollars and cents?

Mr. JOHNSON. The first year I estimate it would cost about $2,600,000. The reason for that is we would have to buy automobiles and equipment for these men; and, the second year that amount would be cut—I do not know how much—probably 20 percent, the second year.

Mr. WIER. Do you have any further questions, Mr. Bosch?

Mr. BOSCH. No, I have no further questions.

Mr. WIER. Mr. Johnson, we appreciate your coming here this morning, and making this contribution. It is our desire to get all of the information we can as to the necessity for this legislation.

In the future, in our deliberation with witnesses, if we desire to call you back, I hope you will be able to return and help us clear up this situation.

I want to thank you on behalf of the committee for being here today and helping us solve this problem in legislation that is pending.

Mr. JOHNSON. Thank you.

Mr. WIER. Do your associates have anything further to say?

Do you support the views of Mr. Johnson?

Dr. FLINN. Yes, sir.

Mr. WIER. Mr. Doyle, we are happy to have you here.

Do you have a statement for the record?

Mr. DOYLE. Mr. Chairman, the Health, Education, and Welfare Department has not been asked to comment on these bills; therefore, I have no comment on the bills.

I am here more or less as a technical witness with respect to health and silicosis problems.

Mr. WIER. Please continue, and give your statement in that respect.

Mr. DOYLE. I have a statement which I believe will take 20 or more minutes to make, and in view of the time, I am wondering if you would want me to come back at some future date?

Mr. BOSCH. Mr. Chairman, I think although the House may be in session, I would be perfectly willing to sit here and hear out the witness. Inasmuch as he is here this morning, I do not think we should ask him to return for this purpose.

Mr. WIER. All right, Mr. Doyle, you may proceed in your own way to outline the mission for which you are here in connection with the four bills.

Mr. DOYLE. The Public Health Service and the Bureau of Mines have long been concerned with the silicosis problem. Our interest

dates back to 1914 when silicosis was a major occupational disease problem in the mining and other dusty industries.

Beginning in 1914 a series of studies were initiated which culminated in the late 1930's. These dealt with the occurrence, pathology, and prevention of silicosis and other dust diseases. It was determined that silicosis, a disease of the lungs, cause by the inhalation of free silicon dioxide, was prevalent in many industries and that the disease was frequently associated with tuberculosis. Engineering and medical methods were developed by which it was believed that the disease could be controlled or prevented. Striking reductions in the incidence of silicosis have resulted from the acceptance of these principles and their use in the design and followup of control measures. In 1956, two decades following the culmination of the basic studies, the Public Health Service sought to determine the prevalence of silicosis in the United States. This study revealed that silicosis is still a major problem in many dusty industries. A total of 10,362 cases occurring in 22 States was found, but it is known that this is an underestimate of the total problem.

The dust studies of the Public Health Service may be divided into three areas. First, those dealing with silica dust; second, those dealing with other siliceous dusts; and third, those dealing with coal.

In the silicosis area there were three major studies, the first in the tri-State area of Oklahoma, Kansas, and Missouri, conducted during the years 1914–17. Of the 720 miners examined, 433, or 60 percent, were diagnosed as having miner's consumption, with tuberculosis as a complication in 103 cases. At this time medical knowledge regarding silicosis was far ahead of techniques for measuring the worker's exposure. Consequently, in this investigation, very little information was developed about the environment. However, the investigators realized that the ultimate solution of the problem would depend on the correlation of the medical findings with dust concentration.

The tri-State study formed the basis for a series of Public Health Service investigations during the twenties and thirties in the dusty trades which included the cement, asbestos, coal, talc, and granite industries. By 1922, dust quantification methods had been improved, and thus it became possible to include in these studies investigations of the environment.

The study of the granite industry undertaken in 1924 was the first epidemiologic study of silicosis in which it was possible to correlate definitely the worker's physical condition with his environment. The granite study served to add materially to our knowledge of silicosis by constructing a graphic picture of what happened to man working many years under dust hazards of a known character. Among the significant findings were the following:

The sharp correlation between the disease and the length of exposure to the dust.

The universal occurrence of silicosis among workers exposed to concentrations above 40 million particles per cubic foot of air.

The almost invariably fatal form of the disease within a short time after the onset;

And the large proportion of cases complicated with tuberculosis.

The study of silicosis in the pottery industry undertaken in the mid-1930's not only pointed up the prevalence of this disease in the

pottery industry, but also disclosed the similarity of the pathology to the disease found in the granite and mining industries.

Studies in industries in which there was an exposure to siliceous dust other than silicon dioxide demonstrated that these dusts also were capable of causing a disease of the lungs similar in X-ray appearance to silicosis but with less disabling consequences to the worker. These studies were concerned with asbestos, talc, slate, and mica.

The first major investigation of dust conditions in the coal mines by the Public Health Service was conducted in the Pennsylvania anthracite mines in 1933. This study showed that 23 percent of the 2,700 miners examined were affected by anthracosilicosis. Anthracosilicosis was defined as a chronic disease due to breathing dust generated in the various processes involved in the mining and preparation of anthracite coal. It was characterized by generalized fibrotic changes throughout both lungs with the presence of exessive amounts of carbonaceous and siliceous material. In the latter stages of the disease emphysema and heart changes often occur. A second coal study undertaken in the bituminous coal mines of Utah indicated a less severe problem. Of 545 workers examined, anthracosilicosis was found in only 16 workers.

These studies, coupled with those of other investigators, led to several conclusions regarding the cause and biologic effects of silicosis, which are still accepted principles in the prevention and diagnosis of the disease. The generally accepted definition of silicosis is a "chronic condition of the lungs caused by the inhalation of fine airborne silica particles in sufficient concentration and over a sufficient period of time to produce fibrous nodules in the walls of the airspaces of the lungs which are readily recognizable in satisfactory X-rays and in pathological specimens. The disease may or may not be complicated by tuberculosis."

Silocosis results from exposure to a dust containing free crystalline silica. When combined with other chemicals or when in the amorphous state, silica will not produce silicosis but may produce other dust diseases of a less disabling character. The four cardinal factors in the development of silicosis are the mineral composition of the dust, the concentration of the dust, the size of the dust particles, and the duration of exposure. In the granite industry it was clearly evident that all workers exposed to dust concentrations in excess of 40 million particles per cubic foot, of air, for a period of 10 years or longer contracted the disease. There was little indication of any serious effect on the men with average exposure of about 20 million particles per cubic foot of air, whereas, in the group where the average concentration was 6 million particles, no unfavorable effects were discerned. Presently, it is generally accepted that the concentration of the dust to which the worker is exposed, multiplied by the percentage of free silica in the dust should not exceed the index 5. On this basis, many of the States have adopted 5 million particles per cubic foot of air as a maximum allowable concentration for an 8-hour daily exposure to silica dust. Mixed dusts have been classified as low, medium, and high silica, with maximum permissible concentrations of 50 million, 20 million, and 5 million particles per cubic foot of air, respectively.

From pathological data it has been established that only those particles between the size of 0.5 and 10 microns are retained by the lungs. Thus, to produce silicosis, the airborne dust must be in this size range. However, there is a feeling in some scientific circles that dust particles below the 0.5 micron size may have pathologic significance.

The duration of the exposure is also an important factor. Numerous studies have shown that the disease appears rapidly in workers exposed to very high concentrations of dust. In those exposed to lower concentrations, the disease becomes manifest only after a period of many years. There are cases on record in which the disease developed in less than 5 years, and others in which it required as long as 50 years of exposure before the disease became evident.

As a result of field surveys, clinical investigations and animal experimentation, it is known that silicosis increases susceptibility to tuberculosis. This infection may appear at any stage of the silicotic process. In fact, active tuberculosis is one of the most serious complications of silicosis, 40 to 70 percent of all fatal cases having been reported with the infection present. Furthermore, on first examination the entire clinical and X-ray picture is often that of extensive tuberculosis. Although the tuberculosis may develop as a result of reactivation of a preexisting latent tuberculosis lesion, it is believed that initial infections are more common. The tuberculosis may spread rapidly and obscure the signs of silicosis as shown by the X-ray. However it is usually possible to find in the X-ray picture a part of the lung free from tuberculosis lesions which retains the mottled appearance typical of silicosis.

Because of the need to concentrate on other occupational diseases, 1935 saw a diminishing emphasis by the Public Health Service on the epidemiology of silicosis. This decision was undoubtedly influenced by the assumption that the fundamental research on silicosis had been largely completed and that prevention was simply a matter of applying the developed environmental and medical controls.

The middle 1930's also marked the introduction of extensive dust control programs by the larger mining and industrial companies.

Within recent years the Public Health Service has undertaken three technical studies which relate to silicosis and health problems in mining operations. The first was a study in 1949 of silicosis in the foundries of Illinois. Silicosis was found in 9.2 percent of the 1,937 men examined. The clinical and environmental findings revealed that the dust conditions in the foundry had improved in the past 10 to 20 years. In the opinion of the investigators, silicosis was due in great part to the higher dust concentrations which probably had existed 10 to 15 years previously. The conditions noted, however, generally left room for further improvement in the control of silica dust.

During 1954 a comprehensive clinical and environmental study of workers engaged in the mining and processing of diatomaceous earth in five plants located in the Western States was completed. X-ray examinations of 869 diatomite workers showed lung changes in 8.8 percent of the workers. The chest disease found in these workers was similar to but not identical with silicosis, and has been referred to in the literature as diatomaceous earth pneumoconiosis. Here again it

was shown that the group with the longest exposure had the highest incidence of lung changes.

The growing use of radioactive materials has spotlighted the Colorado Plateau as the atomic fuel storehouse of the Nation. Because of the potential dangers faced by the men who mine and mill the uranium ore, this area has been the scene of extensive clinical and environmental studies by the Public Health Service over the past 6 years.

Although the uranium mining experiences in Europe cannot be considered a parallel situation, they reveal that a period of from 10 to 17 years may elapse before the appearance of symptoms of radiation injury. Because of the limited period of exposure, medical findings to date on uranium miners on Colorado Plateau may be considered inconclusive. The workers will be followed closely to detect any signs of injury to their health.

Environmental studies have shown that the radioactive gases and dusts can be controlled to recommended limits in most mining and milling operations.

In 1956, a survey was also made of the Vermont granite cutting sheds. The granite sheds represented an ideal situation for restudy since the Vermont Department of Health, as an outgrowth of the 1924 Public Health Service study, has had the sheds under constant medical and engineering surveillance since 1937. Between the years 1935–37, practically the entire Vermont granite-cutting industry adopted dust-control measures. The 1956 study indicated that few exposures exceeded 5 million particles per cubic foot of air. The Vermont Department of Health has also provided annual X-ray examinations of the workers since 1937. Although 535 cases of silicosis were uncovered among the 2,246 workers who have had 1 or more X-ray examinations during 1950–55, it is interesting to note that within the limitations of the X-ray equipment used, no silicosis has been diagnosed in the granite-shed workers whose initial exposure followed the installation of dust controls. Thus, it appears that silicosis is under control in this industry. However, since the concentration of the dust and the duration of exposure are factors in the development of the disease, another decade of experience is required before it can be said that the disease has been completely eliminated in the industry.

The 20 years that have elapsed since the large-scale institution of dust-control measures by the mining and dusty trades industries may be regarded as a period of observation for determining whether these accepted preventative techniques are in reality adequate. With this concept the Public Health Service in 1956 undertook a study of the prevalence of silicosis on a nationwide basis.

Covering the 5-year period 1950-54, the study found 10,362 cases of silicosis that have been compensated or reported in one form or another in 22 States. These States were selected because of the availability of information and because it was known that silicosis is or has been a problem there. If cases processed by compensation agencies but for various reasons denied benefits are added, the total exceeds 13,000.

Of the 10,362 silicotics recorded during this period about 20 percent were dead; 50 percent were totally disabled; and 30 percent were still working, seeking work, or of an unknown status.

Because of the difficulties surrounding the gathering of these data and because of the limitations inherent in the records themselves, we have good cause to believe that the 10,362 cases are an underestimate of the actual situation.

For one thing, according to records on vital statistics, there were more than 10,000 deaths from occupational chest diseases in the United States during 1950–54.

The data reveal that these cases represent primarily an older group, three-fourths of them involving individuals over 50 years of age. This finding, again within limitations imposed by the data, supports the current opinion that many of the cases of silicosis now coming to life represent a residue of old cases. However, these data also show that silicosis is occurring among young men with recent exposure.

Table 1 gives the industry in which the silicotic was employed at the time the case was reported. Since two States did not have this information this is an analysis of 10,152 cases from 20 States. This is a numerical distribution of the cases according to industry and does not relate the cases to the population at risk. Therefore, the data cannot be used to compare the silicosis hazards between the various industries.

You will note that the mining industries produced 6,755, or two-thirds of these cases. Coal mining, including both soft and hard, ranked highest with 4,079 cases; metal mining followed with 1,637 cases. There were 854 cases for which the type of mining was mixed or was not specified.

Another 185 cases were associated with the extraction and milling of nonmetallic minerals such as clay, feldspar, and mica, and in tunneling and quarrying operations.

From these facts it can be seen that silicosis is still associated with a wide variety of industries. If the occurrence of silicosis among young men can be regarded as a criterion, no industry can take credit for complete dust control.

To determine more precisely whether a significant number of new cases are developing among workers entering dusty trades for the first time in the past 20 years, an analysis was made of 3,455 cases in 10 States for which reasonably adequate employment histories were obtained. Of this number, 344 workers, or 10 percent, allegedly received their entire dust exposure after 1935, or sometime during the past 20 years.

The distribution of the 344 cases, by industries, is shown in table 2. The two groups with the largest proportion of cases receiving total dust exposure in the past 20 years were nonmetallic mineral industries with 32 percent and nonmetallic mining and quarrying with 21 percent. Cases were found with less than 5 years of exposure; but, in general, the exposure period averaged about 15 years.

Preliminary tabulation of data collected on 2,746 cases in 11 States for which tuberculosis was recorded when present, shows that 35 percent also had tuberculosis. It was diagnosed in 33 percent of the 1,763 persons who were alive at the time of the latest record. Forty-nine percent of the 983 individuals who had died during the study period were found to have tuberculosis as well as silicosis.

An inescapable conclusion derived from our statistical study, limited though it may be, is that silicosis continues to be an occupational

disease of considerable importance. From the standpoint of dust control, the silicosis problem appears to be more prevalent in those men that had their initial exposure back in 1935. Enough evidence was uncovered to suggest that either the application of dust-control measures is not universal or that other factors such as the adequacy of our present standards, the influence of the particle size and the actual toxicity of various forms of silica, are involved. This fact is evident since silicosis is developing among younger men with recent and short exposure to dust. In addition, we must consider that, with less severe exposure, silicosis may take longer to develop than in the past, obviously a possibility that cannot be determined for some years.

On the basis of the research of the Public Health Service and other investigators, it is apparent that silicosis continues to be an occupational disease of significance. However, experience has shown that it is a preventable disease controllable by proper engineering and medical methods.

Although the principles developed through research appear to be sound and effective in the control and prevention of the disease, the application of dust-control methods in industry is far from universal. The furtherance of the application of such measures is primarily a function of the various State agencies responsible for administering health, labor, and mining laws.

There are certain research needs in the broad area of the dust diseases. Especially paramount at this time is the need to determine the physiologic-pathologic effect of dust particles below 0.5 micron and to explore further the health effects of dust other than silica. Our recent inquiry into the prevalence of silicosis has also revealed the need for better reporting of diagnosed cases of silicosis, a uniform diagnostic terminology, establishment of disability criteria and standards for the supervised employment of nondisabled silicotics.

That, Mr. Chairman, concludes my statement.

Mr. WIER. I think that is a well-prepared statement, Mr. Doyle.

You are not a doctor, are you?

Mr. DOYLE. No, sir.

Mr. WIER. Let me ask you a question here regarding a new field. Are you familiar with the recent survey of uranium health conditions in Utah made by a woman authority from Boston? Do you have knowledge of such a survey?

Mr. DOYLE. I presume you are talking about Dr. Hardy.

I do not know of any survey she made.

Mr. WIER. Is that the lady?

Mrs. BOSONE (committee staff member). Yes; she has just finished a health survey on this matter.

Mr. WIER. Do you have any comments regarding that survey?

Mr. DOYLE. I am not familiar with it. May I have the reference?

Mrs. BOSONE. It is the lady to whom you referred. She has just finished her inspection, or survey, whichever you want to call it, of the uranium mines in southern Utah.

As I read the press releases, she has said that the mining companies were most cooperative, and that so far in that field there were no health hazards so far as she could estimate.

Mr. WIER. For the benefit of the reporter and witnesses, the lady who has just spoken is a former Member of the House, ex-Congress-

woman Reva Beck Bosone, of Salt Lake City. She is secretary of the committee now.

Mr. DOYLE. I have a paper here entitled "Radiation Hazards in Uranium Mining," which I gave before the National Western Mining Congress in Denver, Colo., on February 7, 1957.

I would be glad to make that available for the record.

Mr. WIER. If you will, we will make it part of the record.

(The document referred to follows:)

RADIATION HAZARDS IN URANIUM MINING[1]

(Henry N. Doyle[2])

Many of us are likely to associate the first health damage due to nuclear energy with the atomic explosion over Japan. Actually, however, the mining industry had been plagued with the problem of radiation for many centuries. In particular, the experience of the Schneeberg and Jackymov mines in Europe has made startling medical history.

The Schneeberg mining area is located in the Erz Mountains of Czechoslovakia. On the Bohemian side of the mountains lies Jackymov, a small town of about 8,000 inhabitants. Both these regions have been mined since the 15th century for silver and other metals. Following the exhaustion of their silver veins by the end of the 16th century, they were mined for cobalt, nickel, bismuth, and arsenic. After Curie's discovery of radium, pitchblende in these mines was exploited for its radium content.

In both the Schneeberg and Jackymov communities there has been a high mortality among miners from pulmonary diseases. This condition was described by many writers, including Agricola in his De Re Metallicca. It was not until the late 1800's, however, that certain European investigators identified the affliction as a malignant tumor of the lungs. According to medical reports, 50 to 70 percent of all the deaths of the workers in these mines were due to a primary cancer of the respiratory system. The cause of these lung cancers has been controversial for a number of years. It has been attributed variously to cobalt, nickel, or arsenic. At present, the predominant opinion is that the radioactivity in the mines was responsible. It is possible, however, that no single agent can be blamed for this high incidence but that a number of combined environmental factors, which are difficult to evaluate, may be implicated.

When uranium production started on a large scale in the United States, it was natural for those of us in the health field to view with some alarm the potential health problem associated with the mining of the ores. At the same time, we recognized that the situation in American mines was not at all comparable to that in the European mines and that it was difficult, if not impossible, to draw a corollary. Our mines are not as deep; they yield a rather simple ore as compared to the complex ore in the Erz Mountains; and our workers are seldom employed in underground operations over 40 hours a week. However, early environmental studies in American uranium mines revealed concentrations of radioactive gases and dust considerably in excess of those reported in the literature for the European mines. Consequently, a potential hazard existed and a thorough investigation of the problem was justified.

For a better understanding of the problem, it may be well first to review some of the elementary physics of radiation. An unstable atom in an attempt to reach stability may emit one of three types of radiation. If the nucleus of the atom contains too many protons and neutrons for stability, it will emit an alpha particle which is the nucleus of a helium atom. Under other conditions, the unstable atom may emit an electron which is known as a beta particle. Both the alpha particle and the beta particle have mass. The mass of the alpha particle is almost equivalent to the helium atom, or 4.004 mass units. The mass of the beta particle is almost negligible, 5×10^{-4} mass units. Because of their mass and velocity, these particles possess energy, which is generally expressed as electron volts. It is known that the alpha and beta particles will damage human

[1] To be presented at the National Western Mining Congress, Denver, Colo., February 7–9, 1957.

[2] Assistant Chief, Occupational Health Program, Division of Special Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D. C.

tissue. For any given energy level, the alpha particle will exert a greater destructive force on human tissue.

The third way for the atom to reach stability is through the emission of a gamma ray, which is a photon of energy nearly identical to X-ray. The gamma ray does not possess mass but does have energy and consequently the power of destroying human tissue. In nuclear explosions our primary concern is with health damage from the gamma rays, but in mining operations we are concerned for the most part with damage from the alpha and beta particles.

The activity of a radioactive substance is generally measured in curies. A curie is defined as the quantity of radioactive material which emits 3.7×10^{10} atomic disintegrations per second. In other words, a gram of radium, which is the standard, will emit 3.7×10^{10} alpha particles per second. This gram of radium may be visualized as a machine gun which is discharging 37 billion bullets per second.

Since the atom either loses mass or electrons in the decay process, the result is the formation of a new element. Thus, an atom of radium, when it undergoes radioactive decay, emits an alpha particle, and the resulting new element is radon which is almost 4 mass units lighter than radium. A convenient method of defining the activity of an unstable element is to express its radioactive life in terms of the time it takes to lose one-half of its energy. This is known as the half life. Radium has a half life of 1,590 years. Uranium 238, which has more stability than radium, has a half life of 4½ billion years, whereas polonium 214, a highly unstable element, loses half of its activity in 10^{-4} seconds, decaying almost instantaneously. This, a radioactive element with a very long half life releases a small amount of energy per unit time, whie a highly unstable element with equal mass and a short half life emits tremendous amounts of energy in the same time unit.

Now let us consider for a few moments what happens in a uranium-ore body. Uranium 238, which has a half life of 4.5×10^{9} years slowly emits alpha particles, thus converting uranium 238 by several successive transformations to radium 226. In turn, the radium disintegrates into radon, which is a radioactive gas, chemically inert, and about seven times as dense as air. As a gas, it diffuses from the ore and is released by drilling and blasting operations, becoming dispersed throughout the atmosphere of the mine. It has a half life of about 4 days, which means that in this period of time half of the radon will transmute into another radioactive element. This radioactive breakdown, which is shown in the accompanying slide, takes place in the mine atmosphere and also in the lungs of individuals working in an atmosphere containing radon or radium.

As the first step in the series, the radon atom emits an alpha particle and transmits into radium A. This new element and subsequent transmutation products are known as daughters of radon. Radium A has a half life of 3.05 minutes. It emits an alpha particle to form radium B, which, in turn, decays to radium C and subsequently to radium C′ by beta emission. Radium C′ is the element polonium 214, which I spoke of a few moments ago, and this decays almost instantaneously into radium D. By beta and alpha emissions radium D, which is lead 210, decays to lead 206, which is the stable end product of this disintegration series.

We are primarily concerned in the mines with three alpha emitters—radon, radium A, and radium C′. These daughter products are highly charged nuclei which tend to adhere to the nearest dust particle because of their electrostatic charge. They gain entry into the respiratory system by two methods—the inhalation of radon gas which is present in the atmosphere and the inhalation of dust particles to which the radioactive nuclei are attached. One can visualize in the lung many machineguns discharging bullets or alpha particles at a very rapid rate. A large proportion of the energy of the alpha particle is absorbed by the lung tissue. The energy being delivered by the alpha particle thus becomes important with respect to possible health effects among uranium miners.

The energy contained by an alpha particle is a function of the velocity it has when emitted from the nuclei, since all alpha particles have identical mass. The energy of an alpha particle emitted from radium is 4.8 million electron volts, or, in more familiar engineering units, 7.7×10^{-6} ergs.

The concentration of radon reported in the European mines was in the vicinity of 1,500 micromicrocuries per liter of air, or 1.5×10^{-9} curies. Early experiments in the American mines indicated that our concentrations were considerably in excess of this reported value, ranging approximately from 500 to as high as 100,000, with a median value of about 6,000 micromicrocuries. Contrary to earlier estimates, our calculations, coupled with those of others, indicate that

biologic damage comes not only from radon but also from the alpha particles of radium A and radium C'. Since measurements of these daughter products were not made in the European mines, it is difficult to compare the degree of hazard between the two mining operations. Based on biologic calculation and experiments, a suggested maximum value for mine atmospheres of 300 micromicrocuries per liter of total alpha emitting products has been adopted by several of the States. This value is a potential energy equivalent of 1.3×10^5 million electron volts per liter of air. To carry this concept further: A worker breathes about 10 cubic meters of air a day. If, during a 40-hour workweek, he is exposed to a mine atmosphere which contains the recommended threshold limit of radioactivity, he inhales air emitting an energy equivalent of 10,400 ergs. The arithmetic mean of micromicrocuries per liter of air for all mines obtained in our 1952 survey was 6,300. This means that, during a 40-hour workweek the worker in the average mine inhaled air which emitted about 218,400 ergs, or 21 times the recommended allowable exposure. Although 218,000 ergs is insignificant in terms of heat energy, it is highly significant when applied to the cells of human tissue. In actuality, radioactive energy is seldom expressed in ergs but rather in terms of reps, which is a biologic measurement unit. The concept presented here in terms of ergs is simply for illustrative purposes, since ergs is a more meaningful term to those of us trained in the engineering sciences.

Our work to date in the uranium mines has clearly demonstrated that most mining operations have concentrations of radon and its daughter products considerably in excess of the value which we believe to be a safe one. We have also shown that, through proper ventilation, these concentrations may be reduced in most mines to the recommended value. Since the recommended engineering procedures are available to you in published form, I need not dwell on them. In addition to the suggested control procedures, there are described methods by which the mining companies can assess the concentrations of radioactive gases and dust in their own operations. These are relatively simple procedures and can be used by technicians with a minimum of training. As a further aid to you, the Public Health Service has offered to train mining company employees in the methods of assessing the radiologic hazard and establishing the desired control methods. As in the case of silicosis, these engineering control measures are of prime importance in that they provide the main bulwark of protection for the worker. Medical procedures can only diagnose the disease after it has become evident.

Concurrent with the environmental studies we have conducted, in cooperation with the National Cancer Institute, the State health department, and the industry, a series of physical examinations on the workers. To date, approximately 2,000 miners have been examined. These examinations were performed in 1950, 1952, and 1954, and they will be continued at 2- or 3-year intervals.

In addition to physical examinations, we are conducting an annual census of the miners. After the census is compiled each year, an attempt is made to follow up those miners that have disappeared from the industry to determine if they left for medical reasons. It is assumed that those who are still working are in reasonably good health. The census as an adjunct to the biannual physical examinations is an effective device for determining health damage, since the disease with which we may be concerned progresses rapidly and could run its entire course within a relatively few months.

I am sure that the question occurs to you—do you have any evidence of health damage? As yet, no health damage which might be attributed to radiation has been found through our examinations. It should be borne in mind, however, that the latent period for the development of lung cancers in the European miners was 10 to 17 years. Our 1956 census records show 65 miners with over 10 years of experience in uranium mines. In this group, we have had reports and pathologic evidence of some lung cancers; however, the population at risk is so small that it is impossible for us to say at this time whether these are occupationally connected.

Those of you in the mining industry who have known me either directly or indirectly during the 10 years that I have been associated with your problems do not view me as an alarmist. I hope that you will therefore accept as a conservative, well-supported fact the warning that there exists a severe potential health problem in the uranium mines. If we wait until biologic damage becomes clinically detectable, the changes will then be irreversible and, within our present knowledge, unresponsive to medical therapy. This means that any delay in establishing control measures is extremely hazardous. You can and should take action now, confident in the knowledge that the evidence justifies reducing

the concentration of radioactivity in uranium mines to the limits which have been recommended.

Mr. WIER. Mr. Bosch, do you have any questions?

Mr. BOSCH. I do not think so.

Mr. WIER. Mr. Elliott, do you have any questions?

Mr. ELLIOTT. No; I have no questions.

Mr. WIER. Then, if I can summarize, this is a statistical survey conducted in a particular field of occupational diseases.

Mr. DOYLE. On silicosis, sir.

Mr. WIER. Well, you did mention tuberculosis and other occupational diseases.

In your own way, will you give the committee any views you may have with regard to the need of inspection in relation to Federal participation, the Federal Government's participation?

Mr. DOYLE. I cannot speak from the accident viewpoint, because we are not concerned with that problem.

Mr. WIER. Health is as important as accidents.

Mr. DOYLE. We have public health service in the Bureau of Mines, that works very closely together on the health problem, and has done so since 1914. This has been manifested by series of studies which have extended over the years.

I think we have attempted to study every apparent health problem that came up in the mining industry, and I do not think at the present time there are any severe problems in the mining industry.

There are problems which need investigation, and there are problems which we are now in the process of studying; they may become rather acute in the years to come, but I think we will have developed basic information by that time, if they do become acute, and I am particularly referring to the uranium study whch is going on at the present time.

Our studies in the silicosis field indicated that we had developed the basic information by 1935, and it was simply a matter of the mining companies applying this knowledge, which was done.

Now some 20 years have elapsed since this period, and the resurvey of silicosis in the mining industry, or as I indicated, although we found over 10,000 cases, it was indicated that in most of those cases the original exposure occurred prior to 1935, or prior to the date when the mining companies adopted dust-control measures on a large scale.

I think we will have to wait for another 5 or 10 years before we can say that the silicosis problem is either increasing or decreasing.

We have reasons to believe it is decreasing, but we may have simply lengthened the time of exposure for a man to develop silicosis. It used to take 10 to 12 years, and now perhaps we have put the time up to 25 or 30 years.

So, I think before we can answer that question, we will have to wait another 5 or 10 years, and repeat the study that we talked about.

Mr. WIER. Let me ask you, Mr. Doyle, how do you get into the picture of dust exposure? Are you called in by the miners? Are you called in by the mine owners? Is it your authority to run down reports and go out and check?

Mr. DOYLE. We have no authority in the mine industry or in any industry. The problem is frequently called to our attention by mining groups, by labor groups, or we may recognize it as a problem, and

go to the management and ask permission to study it. We have used all three methods.

Mr. WIER. Is there a need for the Federal Government to go into this field and lay down a code of activity for the prevention of the so-called dust-gathering diseases?

Mr. DOYLE. Once we have called the problem to the attention of the mining industries, we have found them to be most cooperative. For instance, in our present study of uranium diseases, they have given us 100 percent cooperation. At no place have we been denied entry to the mining companies' properties.

Mr. WIER. Do you get calls from organizations where they say they have a lot of sickness and cannot find the cause of it?

Mr. DOYLE. On several occasions we have.

Mr. WIER. Will you explain that?

Mr. DOYLE. Several years ago, one of the unions called our attention to a problem they thought existed in a potash mine. An investigation of it showed the problem did not exist, and there was no need for a study.

They have on several occasions brought to our attention other problems which necessitated very lengthy studies, and there were others that required only short investigations.

Mr. WIER. Do you have a large staff to meet this situation?

Mr. DOYLE. We have a staff of approximately 885 people, and we are concerned with all work in health problems, and it is not limited to the mining industries.

Mr. WIER. What would be your recommendations if this legislation were to be acted upon favorably? How would the requirements work out for both accident and health coverage?

Mr. DOYLE. If this were to be acted upon favorably, it would give no authority to the Public Health Service. It would be entrusted within the Bureau of Mines.

We have a healthy relationship in working with the Bureau of Mines, which goes back to 1914.

In essence, we offer our facilities to the Bureau of Mines, both in the form of research and field investigations.

Mr. WIER. And in the coal mining industry, are your services called upon?

Mr. DOYLE. No, sir; the Bureau of Mines have their own facilities for that.

Mr. WIER. My original question was could they cover both the health and accidents involved?

Mr. DOYLE. In the field of health, we have always worked cooperatively with the Bureau of Mines, and should this legislation be passed, I am sure we would in the future.

They do not have a medical staff at the Bureau of Mines, so we furnish them with that complement.

Mr. WIER. That was the first thing I was trying to seek information on.

I do not think they have experienced doctors, and I do not think they have the equipment to go into these fields and do the work.

Are there any further questions?

Mr. BOSCH. I have no questions.

Mr. WIER. We want you to know that we appreciate your attendance and your contribution here is most interesting, and it will help us in our determination of the necessity for this legislation.

Mr. Johnson, again I want to thank all of you for your attendance here this morning.

My colleague, here, Congressman Carl Elliott, of Alabama, represents quite a mining community in his State, and we have requested Congressman Elliott to make comments on the Alabama situation, and such other comments as he may wish to make for the committee.

Congressman Elliott, would you like to comment and make your observations at this time, or would you prefer to come back when we have other witnesses?

Mr. ELLIOTT. Off the record, please.

(Discussion off the record.)

Mr. WIER. On the record.

Mr. Elliott, would you like to proceed?

STATEMENT OF HON. CARL ELLIOTT, MEMBER OF CONGRESS FROM THE STATE OF ALABAMA

Mr. ELLIOTT. My name is Carl Elliott. I represent the Seventh District of Alabama.

Last fall I had the privilege of being a member of the Subcommittee on Mine Safety in the Metallic and Nonmetallic Mines. This subcomittee was chairmaned by the gentleman from Montana, Mr. Metcalf. Other members were the gentleman from Georgia, Mr. Landrum, and on the Republican side, the gentleman from Arizona, Mr. Rhodes, and the gentleman from Montana, Mr. Fjare. At the time there were several bills pending before the House Committee on Education and Labor relating to inspections and investigations in metallic and nonmetallic mines and quarries.

The Metcalf subcommittee, last fall, started out with the common understanding that it would try to do a very thorough job of investigating the need, if any, for mine safety legislation in these so-called metallic and nonmetallic mines. We actively sought information relating to health, safety conditions, accidents and occupatitonal diseases in such mines.

Because of an illness necessitating surgery on my second son, I did not get to accompany the subcommittee on all its investigations. I was, however, present in the city of Duluth, Minn., where we held hearings, and made on-site inspections on August 24 and 25, 1956. Later, I was present at Butte, Mont., where we looked into conditions in the copper mines round about and where we held hearings on September 18 and 19. On September 21, 1956, we held hearings up in the silver mining district at Ouray, Colo. Later, on December 3, 4, and 5 we held hearings in Washington, D. C.

When we finished, last fall, I believe every member of the subcommittee felt that additional hearings should be held. As a matter of fact, the subcommittee recommended unanimously—

that the overall subject of safety in the Nation's metallic and nonmetallic mines should be given further study, and that additional investigations should be made in Michigan, Alabama, Colorado, the tristate area of Kansas, Oklahoma, and Missouri, and such other places as a subsequent committee might find necessary—

and that such hearings—

be held to the end that the subject of safety in metallic and nonmetallic mines be thoroughly explored.

Now, I am happy to appear before this subcommittee, chairmaned by my longtime, good friend, the gentleman from Minnesota, Mr. Wier, and give such help to the subcommittee as I am able to do.

In the investigations that I have referred to, our subcommittee found that mining in the metallic and nonmetallic mines, namely, in the iron, copper, and silver mines is a hazardous occupation. You can speak of it in any way you please, but mining remains hazardous whether it is in the ore mines of the Birmingham district, the copper mines of the Buttes, or the silver mines of the Rockies. Out in Colorado, I picked up this term which I had never heard before. Somebody referred to a manner of mining that prevailed out there as "a widowmaker." I thought of how descriptive that term was, and of how applicable it might have been in the old days, in the coal-mining areas that I am familiar with in Alabama.

Mr. Chairman, I have had some experience with mine-safety legislation. I was a member of the Committee on Education and Labor of the United States House of Representatives when we drafted, and pushed through to passage, the coal mine safety bill and, today I am happy that, under the impact of that legislation passed, I believe, in 1952, the accident rate in coal mines has been cut by 50 percent.

With all this as a background I am willing to offer you the following recommendations: First, any legislation reported out by this subcommittee should be drafted in such a way as to preserve, and certainly not to interfere with, the fine safety work being done by the employer group and the employee group throughout the metallic and nonmetallic mines of America. We saw several areas where a fine job was being done; and I urge that the effort being put forth by these groups not be disturbed. At the same time we want to preserve and perpetuate, to foster and encourage as much State and local government interest in the problem as is possible. The trouble is that there is not enough State and local interest today. For instance, I believe that the Mine Inspection Department of the State of Alabama is undermanned. There is at least one State that does not have a mine-inspection law. One State elects its mine inspectors, at the county level by the vote of the people, and the qualification requirements for mine inspectors in that State are very rudimentary.

Some States have very fine laws.

The business of mine safety is a subject that all of us must be interested in if human lives are to be saved.

I have long been interested in the subject of mine safety. I represent an area in the Warrior Coal Basin that has a number of coal mines. The Seventh Congressional District of Alabama produces, also, I believe, the largest amount of brown iron ore produced by any congressional district in America. My district borders the Birmingham, Ala., area where from 6 to 10 percent of the steel of America is annually produced. A lot of my folks work in the iron and steel operations of the Birmingham district.

I am proud of the iron and steel industry of Alabama. It has earned for us the title of "The Pittsburgh of the South." Directly or indirectly it furnishes large amounts of employment to the peo-

ple who work in the steel industry itself, and to those who mine the coal that goes into the steelmaking process. I did not want to see this committee do anything that would harm this vital industry. If safety conditions can be improved in the industry, this will make the industry itself stronger.

Secondly, if and when you draft safety legislation for these mines, I would suggest that the United States Bureau of Mines be given the right of entry into any metallic or nonmetallic mine in America.

This business of mining our natural resources, this business of mining our iron, copper, silver, coal and such, is one that is connected with interstate commerce, or one which heavily affects interstate commerce and, therefore, there is a Federal interest.

In addition, I have the feeling that all of our natural resources, of such nature, are affected by a public interest in the proper mining of them so as to conserve the resources themselves. I feel certain that the public is entitled to have an interest in seeing that such mining operations are carried on safely. Therefore, the Bureau of Mines should have the right of entrance into these mines.

In answer to that I have heard many of the mineowners and managers say that they "invite" the agents of the United States Bureau of Mines to enter their mines at any time they want to do so.

All of that is well and good, Mr. Chairman, but as a matter of common experience all of us know that when we invite somebody to our place of business, or our mines, or wherever it may be, we are ready for them. Under this system, I have an idea that when the Federal inspector is coming the mines are oftentimes cleaned up and brushed up and made ready for his coming.

Mr. BOSCH. Will the gentleman from Alabama yield?

Mr. ELLIOTT. Yes.

Mr. BOSCH. You mentioned a few moments ago that you thought they have the right to enter at any time, and management and labor said they have the right to enter.

Mr. ELLIOTT. Mr. Johnson has said the mines invited the agents of the Bureau of Mines to enter at any time, but the fact remains that the Bureau of Mines does not have the right to enter except upon invitation of the owners of the mines. It does not have the right per se to enter and make a safety inspection.

Mr. BOSCH. You are suggesting then that legislation should be passed making it compulsory for the Bureau to send in an inspector periodically, and if so, how often?

Mr. ELLIOTT. My thought is, and I do not want to be pinned down specifically on it, because, as I say, we did not complete our study. My thought is that first the Bureau of Mines should have the right to inspect any of these mines whenever information comes to it that an inspection is needed, or whenever it feels or has information that somebody ought to look into it.

Mr. BOSH. Is that not what happens now?

Mr. ELLIOTT. No, it is not what happens, unless the agents of the Bureau of Mines are invited.

In other words, suppose I am a mine operator, and you are an inspector. I invite you to come, perhaps, or perhaps I do not invite you. If I do invite you to come, you come in, and if I do not invite you, you do not come in.

Mr. Johnson, is that not a correct statement?

Mr. JOHNSON. It is true. We have no right of entry into the mines except where a mine might be located on Government land. That would be controlled by the United States Geological Survey, and we make the safety inspections for them. However, what Mr. Elliott has just said is true.

I have had no experience with the mines in Alabama, but my experience in Minnesota has been that we are always welcome. But, yet, we cannot go to them and say we are going in.

I might say that I have never been refused entry to any mine.

Mr. ELLIOTT. I would like to say here that I will vote for a bill that would require an inspection once a year by an agent of the United States Bureau of Mines with respect to safety conditions. I think it is just human nature—if you have these inspections and recommendations, you get vast improvements in the safety situation. I know that was true in the coal mines. We have absolute proof, statistically and otherwise, that when we went into the coal mines to inspect them we brought about safety improvements in the mines.

Mr. BOSCH. Will the gentleman from Alabama yield for another question?

Mr. ELLIOTT. Yes.

Mr. BOSCH. Just follow that thought through. Is it not human to assume if the Government does put such legislation on the books, that the mining companies might very well say, "Why should we bother to continue improving safety factors in the mines? Because the Government is in it now, so let them do it."

We must always remember that labor and management have made great progress with regard to safety regulations in the mines.

Mr. ELLIOTT. I did not get the impression from the coal mines, or from the metallic mines, that we looked into that if Government does exercise the right of entry for safety inspection that it will stifle or set back the safety work now being carried on by mine management and mine unions. As I pointed out earlier in my testimony, I certainly would want to see both mine unions and mine management encouraged to continue doing the safety work that they are now doing.

Mr. BOSCH. I feel, if someone else assumes the obligation, the common feeling is, "We will not bother any more."

Mr. ELLIOTT. What you say may be true, but I think that legislation can be enacted in this field that would not disturb what is being done presently, but would add to the safety conditions by getting to those mines that do not at the present time cooperate and who do not have safety programs.

During our investigation, we found—and again I could not name any specific mine or place, because I do not remember; but we had testimony to the effect that specific mines in specific areas did not have nearly as good safety setups as those mines we looked into in other places, that is, the larger mines.

Thirdly, I would recommend any law you may draft have what I would call an educational provision.

We got the impression, or at least I did, everywhere we went where there were good safety educational programs that accidents were fewer than they were in those areas where the programs were meager, or where there were no such programs.

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I think Mr. Johnson touched upon that, and I would say that since there are only 18 or 20 States that are mentioned, we ought to have some sort of educational provisions providing for grants from the Bureau of Mines to the States to be matched, and to carry on safety education programs, or in lieu of that, the Bureau of Mines should be given sufficient money in order to carry on the education work itself.

Educational work should be carried on in connection with and in cooperation with the States so that we may really have an up-to-date safety program at all times.

Fourthly, I would like to recommend that the law be written in such a way as to make the United States Bureau of Mines, the central source of statistical information on mines and mining and with especial reference to safety.

Mr. Johnson, or one of his associates, told us last fall that they had sent out requests for information, and most of the larger mines in the country answered their questionnaires, but the smaller mines did not answer, and consequently there is no good single source of statistical information on the metallic mining industry in the United States.

I think it should not be too much trouble to write a bill that would enable the Bureau of Mines to get such statistical information that would be helpful in promoting safety and reducing the number of accidents and deaths in this hazardous field.

Mr. WIER. Is it your finding, in developing the facts, that many mines do not report accidents or disease, which would make the picture somewhat different?

Mr. ELLIOTT. I do not know how much it would change the picture. I got the impression there are a large number of mines in this field which do not report, though they are requested to do so.

Mr. WIER. Mr. Johnson, is it compulsory for all recognized coal mines to report all accident and health statistics? When I say health, I am talking about the situation that develops where there seems to be an increase in the dust-gathering diseases.

Mr. JOHNSON. The coal-mine inspection law provides that all coal mines are compelled to report, but that is not true for metallic and nonmetallic areas. We do get those reports, but some of the smaller mines we have to write to them several times to get the reports.

It is necessary for all coal mines to report accidents.

Mr. ELLIOTT. But, so far as the metallic mines are concerned, unless they agree, or unless they actually answer your requests, you have no way of getting the information whatsoever.

Mr. JOHNSON. That is correct.

Mr. ELLIOTT. My fifth recommendation would be that we include something in the law about industrial health, and I am going to refer primarily to silicosis.

Silicosis is a disease that was practically unknown, that is, generally speaking, in the mining industry until a few years ago. But now we recognize it, and we do not do much about it.

I do not know if this is true, but I have heard it, that in Alabama we have a dust-silica measuring machine for use in the ore mines in the Birmingham area, but we do not have anyone who knows how to operate it.

As I say, I do not know whether that is true or not, but I have been told that it is.

Mr. WIER. You might direct that question to Mr. Doyle.

Mr. ELLIOTT. Do you know, Mr. Doyle?

Mr. DOYLE. I suspect that is correct, because there is no division of industrial hygiene in the State.

Mr. ELLIOTT. Does your department do it?

Mr. DOYLE. No, sir; unless we are requested by the State health department.

Mr. ELLIOTT. I think, in order to determine in our Alabama mines whether or not they have sufficient dust to cause the disease of silicosis, they have to take some sort of sample and send it to Pittsburgh for examination. You know what happens in that type of situation—there just is not much that does happen.

Alabama is, I think, due to its mining industry, one of the very highest States in the number afflicted with the disease of silicosis.

In a study conducted by the Public Health Service—there is an article which appears in the AMA entitled "Some Facts on the Prevalence of Silicosis in the United States"—it was found in the workmen's compensation records in the 22 mining States, that there were 10,362 cases of silicosis, and those were found in those States for the year 1954. Of that total, 706 cases were found in Alabama, and the rate of silicosis in Alabama appears to be among the very highest.

This study also reveals there is a high incidence of tuberculosis in the area where there is a high incidence of silicosis.

Mr. BOSCH. Will the gentleman from Alabama yield on that?

Mr. ELLIOTT. Yes.

Mr. BOSCH. In connection with your statement, can you give us the number of man-hours lost as a result of those diseases?

Mr. ELLIOTT. No, sir; I cannot, because I do not have the figures.

Mr. BOSCH. Mr. Doyle, do you have any figures on that?

Mr. DOYLE. No, sir.

Mr. ELLIOTT. We do know the number of cases reported in the study over these 4 years, the ten thousand-and-some-odd cases. We know this is highly inaccurate because of the source of information they had to go to, namely, the compensation records of the States, and those records do not reveal all of the cases in the field.

For instance, in the State of Alabama I believe the law is that a suit must be brought or a claim made under workmen's compensation law for silicosis within a period of 1 year from the onset of the disease.

Those cases not reported within a period of 1 year, of course, would not be found, and what happens in most cases, of silicosis, I think, is that the person who has it, has what we might call a case that is disabling to less than 50 percent, and the person would rather try continuing on with his job than go to court and show that he was afflicted with silicosis.

Mr. BOSCH. Will the gentleman from Alabama yield there?

Mr. ELLIOTT. Yes.

Mr. BOSCH. Mr. Doyle, I think in your statement you said something about it would be almost impossible to determine whether a person had silicosis. What length of time is it between the inception of the disease and the discovery?

Mr. DOYLE. It is a slow-progressing disease. It can be diagnosed and is diagnosed by X-ray at various stages of it. It is usually classified as stages 1, 2, and 3; stage 1 and 2 being not generally disabling,

but stage 2 is disabling. You can diagnose it on an X-ray film most any time after the silica nodules become apparent. But at that stage it may not be a disabling stage.

Mr. ELLIOTT. Many of the States do not have compensation laws that recognize silicosis as a disease for which compensation will be paid. And, of course, in those States, as I understand from this report, there was no opportunity to obtain figures which would help in the study of silicosis in those areas.

Mr. Doyle, perhaps you can correct me on that.

Mr. DOYLE. This was confined to 22 States of the 48, and those were the 22 States in which we would expect to find this silicosis problem.

We omitted the State of Florida, for instance, although it has a law compensating for silicosis. But generally there is no silicosis problem in Florida. We may have picked up 3 or 4, but the number we picked up would have been insignificant in comparison to the total, and the same thing is true of Texas.

Mr. ELLIOTT. It is very graphically illustrated by the map you furnished us last fall.

Mr. DOYLE. I think the committee has a copy of that map.

Mr. ELLIOTT. Which shows Alabama with 706 silicosis cases, and our sister State of Mississippi with none.

Mr. DOYLE. If I may interrupt, we did not include Mississippi in the study, because it does not have the type of industry that would contribute to silicosis problems.

Mr. ELLIOTT. If your study had included Mississippi, would it be your judgment that you would not have found more than 2 or 3 industrial cases of silicosis?

Mr. DOYLE. Yes.

Mr. ELLIOTT. Perhaps some of the people who had worked in Alabama had picked it up before they returned to Mississippi.

Off the record, please.

(Discussion off the record.)

Mr. WIER. On the record.

Mr. Elliott, do you have further comments to make?

Mr. ELLIOTT. Yes.

I would like to say in summarizing, those are the fields in which I feel this committee might make a contribution to better safety in the metallic and nonmetallic mines in this country.

As one who has watched these holes in the ground disgorge themselves of dead bodies, men whose lives had been snuffed out in one of our most hazardous occupations, I would feel if the accident rate in these mines all across America could be cut by 50 percent, or even 25 percent, or even by 10 percent, by the spending of whatever it would cost to enforce the law, that it would be a fine investment.

Mr. Chairman, it is my overall opinion that the United States is not a very safety-conscious nation. I think there is much work to be done in the future in the safety field. Certainly I know that one has but to ride the narrow shaking shafts, or walk the dimly lighted headings, or climb into the slippery slopes to realize that safety conditions in America's mines constitute a problem that government at all levels should contribute whatever it can to solve.

I want to thank you, Mr. Chairman and members of this subcommittee, for giving me this opportunity.

Mr. WIER. I now find myself very curious about several things, and I am going to pose a question to Mr. Johnson.

Mr. Johnson, I would like to get your reaction to the four points that Congressman Elliott so well presented. Those were your right to enter any mine in the country without an invitation; the educational program——

Mr. JOHNSON. First, in regard to entry, as far as our work in the Bureau of Mines is concerned, we have had no trouble in entering these mines; at least I have not—any mine I wanted to go into, so long as I worked with the Bureau of Mines I have been able to go in and see what I wanted to see.

Mr. WIER. Does that apply to the metallic and nonmetallic mines?

Mr. JOHNSON. Yes. Most of my experience has been with the metallic and nonmetallic mines. I have had some experience in coal mines, but not as much as in the metallic and nonmetallic mines.

The second, on education, my personal opinion is that we could do a lot of good by education. I do not want to imply that we would do no good by inspection, but even when the inspection trouble has passed, we still have to keep up our safety education program, because we have to educate the people and keep them educated as to the hazards.

What was the third one?

Mr. WIER. Mr. Elliott, will you give them to Mr. Johnson?

Mr. ELLIOTT. Yes. I discussed silicosis.

I believe the third one was in regard to reporting, giving the Bureau of Mines the authority to collect statistics, and make it the statistical center.

Mr. JOHNSON. At the present time, I think we testified at the Metcalf committee, our coverage for coal mines, I believe we testified it was about 80 percent, and after that time, we made a survey from the various field offices that collect statistics on coal-mining injuries, and we found our coverage about 91 percent. In metallic mining we have no accurate figures on which to base a finding, but Mr. Reese, who is Chief of our Branch, told me he thought we were getting about 81 percent, and those who did not report were the smaller ones.

We feel the coverage we are getting is rather accurate statistically. However, our big problem is that we do not have sufficient staff in Washington, in our office here, to publish these statistics. In other words, I think it was brought out in the testimony by other people that the publication on coal mine statistics was very current, and metallic mine statistics were not, and that is true.

However, since that time, we have started to increase our staff, and we hope that we are going to get more publications out in the future.

Mr. WIER. How often do you have occasion, or a desire to check a mine that has aroused your suspicion in the metallic or nonmetallic field?

Mr. JOHNSON. You mean for safety?

Mr. WIER. Yes.

Mr. JOHNSON. That does not happen very often.

When we had our headquarters in Duluth, Minn., there were a few times when we got requests from workers, telling us they had serious conditions in the mines or the quarries, wherever they were working, and I would send one of the men, and ask the company for permission to go into the mine and investigate the hazard—we would not tell them the name of the man who had reported it—we would go in and make

an investigation, and when we found out what it was we would write a report and send a copy to the company and a copy to the local union. When we did that, I want to emphasize, we were given permission to do so.

Mr. WIER. If I went to your office to make inquiries into the number of accidents, or in regard to badly ventilated mines in the metallic and nonmetallic industry, would you have any available information on that?

Mr. JOHNSON. Normally, when we get a report, the accident form is filled out by an individual mining company and sent in to us. This report is supposed to be kept confidential as to the name of the mining company. We could give you the number of accidents for any particular State or any particular locality, but the individual mine statistics are kept on a confidential basis.

Mr. WIER. Does that apply in the case of your department, Mr. Doyle? Suppose I should tell you there was a mine in Utah or Montana where there seemed to be a high rate of dust-gathering diseases, silicosis and tuberculosis. Would there be any likelihood that you would have any information on that mine?

Mr. DOYLE. There would be little likelihood that we would have direct information on the mine, because we do not do routine inspections.

Mr. WIER. So, in both cases, injury and health, there is a gap that is still unbridged insofar as the Federal Government is concerned.

Mr. DOYLE. Mr. Wier, I would like to qualify that to this extent. We could go back to the State health department or the State bureau of mines, and get the information from them, and in all likelihood, they would have it. We, as a Federal agent, would not have it.

Mr. WIER. I am led to believe that in some States the records are not too good, the States which do not have any compensation laws covering these dust diseases. You have States where it is almost impossible to get the information you desire. Is that not true?

Mr. JOHNSON. Some of the States have county mine inspectors and State mine inspectors, and they go to the mines regularly, and at regular intervals, and we can get those reports if we want them.

As to our own reports, I think it was brought out we do not have the staff to do that. We have records on some of them, but that is only on a small number.

Mr. WIER. Are you replying to my question by stating that every State that has mines has mine inspectors?

Mr. JOHNSON. No.

Mr. WIER. That is what I am trying to get at, your availability at the local level to secure this information so that we would know or could know what developed in those mines in those States.

Mr. JOHNSON. Let me see if I have your question.

You would want a report on the condition of safety in any metallic mine at any time?

Mr. WIER. Yes.

Mr. JOHNSON. I do not think we could give it.

Mr. WIER. And on accidents?

Mr. JOHNSON. The tabulations we put out, we do not show the name of the mine. We put it out by the State and it would be in that form.

Mr. WIER. I think one of the points that Congressman Elliott brought out was the fact that in coal mines you have compulsory compiling of accident reports.

Mr. JOHNSON. Yes; that is correct.

Mr. WIER. But in metallic and nonmetallic mines you do not.

Mr. JOHNSON. That is right.

Mr. WIER. And, therefore, many mines do not answer your questionnaires.

Mr. JOHNSON. That is correct.

Mr. WIER. Is there anything further?

I want to thank every one of you again for being here this morning, and I think you have given us the position of your departments and your own personal views in the field of legislation that our committee is requested to get the facts on.

If there are no further questions, the committee will adjourn until future notice.

(Whereupon, at 12:05 p. m., the committee adjourned, to the call of the Chair.)

MINE SAFETY

(Metallic and Nonmetallic Mines)

WEDNESDAY, JULY 31, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON SAFETY AND COMPENSATION OF THE
COMMITTEE ON EDUCATION AND LABOR,
Washington, D. C.

The subcommittee met at 10 a. m., room 429, House Office Building, Hon. Roy W. Wier (chairman) presiding.

Present: Representatives Bosch and Zelenko.

Mr. WIER. The committee will come to order.

There will be another member here, I assume, but I hesitate to wait too long because we have a number of witnesses here this morning.

I might say for the benefit of all of those present here that this subcommittee meeting comes about because of a demand on the part of people in the country for the extension of coal mining inspection to nonmetallic mining inspection throughout the so-called metal mining States. It is true that there was a committee headed by Congressman Metcalf, of Montana, who had the first task and that was to go out into some of these States and hold hearings for the purpose of giving the people in those areas an opportunity to testify. His was merely an investigating committee and this committee is the legislative committee. We now pick up the four bills that have been introduced dealing with nonmetallic mining inspection. It will be our job to determine whether the need for metallic mining inspection is necessary.

In a way we are repeating some of the activity of the Metcalf committee, except that we are going at it on a legislative basis. They did it on an investigatory basis.

Before we hear the first witness, I have some material here that has been requested to be inserted in the record.

The first one is from the Chamber of Commerce of the United States and apparently the United States Chamber of Commerce is opposed to H. R. 3394, the Kelley bill. If there are no objections, that will be inserted in the record at this point.

(The material referred to follows:)

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D. C., July 5, 1957.

Hon. ROY W. WIER,
Chairman, Subcommittee on Safety and Compensation, House Committee on Education and Labor, House Office Building, Washington, D. C.

DEAR MR. WIER: The Chamber of Commerce of the United States strongly urges your subcommittee not to report favorably on H. R. 3394 and related bills to authorize and empower the Secretary of the Interior, acting through the United States Bureau of Mines, to make annual health and safety inspections and investigations in metallic and nonmetallic mines and quarries.

Primary responsibility for safety in mining of necessity rests with the mining companies and with the miners. Mining companies recognize this and are doing all in their power to prevent accidents and promote healthy working conditions. They employ safety engineers and promote safety campaigns and training courses for their mine foremen.

Most States have adequate mine-safety laws and well-staffed safety control agencies. They set minimum safety standards and aid the mining companies in safety and first-aid training. Under their guidance steady progress has been made in reducing mine and quarry accidents and promoting safe and healthy working conditions.

The following statistics collected by the United States Bureau of Mines show the progress that has been made in mine safety in recent years.

Injury rates in United States mines and quarries per million man-hours worked

	1944–48 (average)		1955 fatal	Nonfatal
	Fatal	Nonfatal		
Metal mines	0.72	51.89	[1] 0.56	[1] 41.39
Nonmetal mines (except quarries)	.64	46.92	.47	38.65
Stone quarries	.43	31.58	.31	22.12
Coal mines	1.15	60.30	[1] 1.04	[1] 48.82

[1] Preliminary figures.

We can see nothing in this record to justify legislation to supplant the jurisdiction and responsibility of the States in regard to mine safety. We believe that the best government is that which is closest to those being governed. If the laws of any one State, or their administration, are insufficient to protect the miners' lives and safety, every effort should be made to improve them. But it is not necessary to impose a Federal bureau on top of a State one.

We have included in the figures of injury rates given above those of the coal mines to show that both the frequency and severity rates of accidents occurring in metallic and nonmetallic mines and quarries are considerably lower than those of coal mines. This is because coal mines have the additional factors of danger of explosions and fires due to coal dust and explosive gas. It was these conditions which led to the adoption of legislation authorizing Federal inspection and police powers over coal mines.

The United States Department of the Interior does not believe that such legislation is necessary or desirable for metal and nonmetallic mines and quarries. Acting Interior Secretary Chilson, in a letter of April 26, 1957, to Chairman Barden, Committee on Education and Labor, had this to say:

"It would be extremely difficult to prepare a uniform code or set of standards to cover all conditions and practices encountered in metallic and nonmetallic mines and quarries. Mining in such facilities is carried out under an extremely wide variety of conditions and practices, and reasonable standards and rules pertaining to health and safety conditions could be applied only in the broadest sense. This Department is of the opinion that the administration and regulation of safety practices with respect to metallic and nonmetallic mines and quarries, therefore, become a problem of local concern."

For these reasons, we strongly urge your subcommittee not to report favorably on H. R. 3394 and related bills.

We ask that this letter be made a part of the record of the hearings on this legislation.

Cordially yours,

CLARENCE R. MILES.

Mr. WIER. I have a statement by Congressman Berry, of South Dakota. That is the State in which you have gold mining, homestead mines. Mr. Berry signifies his opposition and feels that the local laws there are fully capable of doing the job.

Congressman Berry requests that this statement be inserted in the record.

If there is no objection, the statement will be inserted in the record.

(The statement of Congressman Berry follows:)

STATEMENT OF REPRESENTATIVE E. Y. BERRY, SECOND DISTRICT, SOUTH DAKOTA

Mr. Chairman, I am E. Y. Berry, Member of Congress from the Second Congressional District of South Dakota. I appreciate this opportunity to appear before your committee and present my views with regard to H. R. 3394.

I am strongly opposed to the passage of H. R. 3394 or any other similar legislation which would put the Federal Government in the business of inspecting and policing the mines of the Nation. Certainly the Federal Government has an interest in mine safety, but the job of enforcing safety in the mines is a job which has been in the past and must in the future be done by the State.

I see no reason whatever for the Federal Government to invade this field of endeavor. Basically and fundamentally, this is a matter for the States, and unless and until the States refuse or fail to take jurisdiction, the Federal Government has no right to invade this field. I am opposed to the centralization of power in Washington. I am opposed to the Federal Government reaching out for greater, further and continued authority. The State mine safety programs, which are in existence and which are doing a good job, will only be weakened by the Federal assumption of this authority.

There are two causes for accidents. First, unsafe conditions and, second, unsafe conduct. In general, management can effectively eliminate unsafe conditions. But the elimination of unsafe conduct requires a much more comprehensive and intensive effort since we are dealing here with the frailties of human nature. There must be developed by indoctrination, education, and training a safety-conscious climate which will result in an enthusiastic acceptance of and an eager willingness to cooperate voluntarily in this worthy cause. This sort of program can, of course, and must, of course, be developed by management-employee relationships and cooperation and with both Federal and State cooperation. But neither the Federal Government nor the State government can legislate human carefulness.

In considering why mine safety is a problem which must be developed and handled by State government and by State law, it should be borne in mind that a development of the mineral resources of the State is a matter of most vital interest to the State itself. In the Western States, particularly, their future is entirely interwoven with the aggressive and successful development of their mineral and natural resources. Such development is vitally affected by the nature of the operations engaged therein, and no State can relinquish control of the manner of development of its own mineral resources without, to a great extent, relinquishing its own participation in its own growth and success. The State is concerned with the welfare of its citizens and the working conditions of its employeees, and, as a matter of fact, is much better equipped to deal with it than is the Federal Government. The added incentive of its own self-interest is at stake and is a strong impetus in such development which is not present in Federal action.

Another thing, the operators themselves, as well as the employees, have a great interest in such legislation and have a personal interest in having some voice in the manner of its enforcement and administration. These programs have been and will continue to be better and more effectively carried on by State, rather than Federal, jurisdiction.

Action by the Federal Government in this field would mean the imposition of cumbersome administrative machinery. It would mean the State would be denied control of an activity vitally affecting its growth and public interest, Federal assumption of this control would not be to the best interests of the industry, the operator, the employee, or the State and community itself.

In my own congressional district which embraces the Black Hills of South Dakota, is located the Homestake Mine which has been in operation since 1877, and which presently employs about 1,800 men. It is the largest gold mine in the Western Hemisphere, and is vitally interested in this legislation.

The Homestake has had a safety program for nearly a half century. They employ three full-time safety engineers who constantly devote their time and energy toward the improvement of working conditions and safety. They have an employee-safety suggestion program with awards to the winners. They have a well integrated safety committee system with a central safety committee composed of the general manager and all department heads, a monthly meeting of the mine superintendent, safety engineers, and all underground foremen, and a workman's mine safety committee. These committees meet to consider

accident reports and to make recommendations with a view of accident prevention.

Homestake has taken advantage of the research work of the Bureau of Mines in the field of mine safety and the educational program of that agency with respect to mine rescue work. For many years they have called on the Bureau of Mines for assistance in mine rescue and first-aid training. They appreciate the effectiveness of the present relationship and their safety committees take full advantage of these helpful programs now being conducted by the Bureau of Mines.

South Dakota and the Western States have an enviable safety record. They have State mine inspectors functioning under the framework of the State mining codes which are set forth in the various State statutes. Such State officials acting in conjunction and cooperation with the safety departments of the various mine operators, have proven more than adequate in competently handling problems of mine safety.

The mines of the West have outstanding safety programs and outstanding safety records they have proven that they are vitally interested in preventing accidents, not only for humanitarian reasons, but because it is to the best economic interests of both the employer and the employee to establish these safety programs which reduce the accident hazard. Should H. R. 3394 and similar bills be adopted, the net result would be to convert the Bureau of Mines into the role of a policeman, seriously impairing its present efficiency in the field of research, and accomplish little, if anything, in improving safety conditions in the mines of the West. As serious as this would be, it would at the same time be another step toward complete centralization and control of everything from Washington.

Mr. WIER. I am happy to welcome here the leadership of the International Union of Mine, Mill, and Smelter Workers, who are parties to most of the metallic mining in the United States.

I was very happy to be able to make it possible for you and your officers to arrange a meeting here this morning without going to the extra expense, at a later date, of coming here. As I understand it, Mr. Clark, president of the International Union of Mine, Mill, and Smelter Workers, will testify. I see that he has quite a lengthy statement.

If you will identify yourself for the reporter, who you are, where you are from, you may then proceed with your statement either by having it inserted in the record or making such comment as you want, or if you prefer to present the whole statement, fine.

STATEMENT OF JOHN CLARK, PRESIDENT, INTERNATIONAL UNION OF MINE, MILL, AND SMELTER WORKERS; ACCOMPANIED BY ORVILLE LARSON, VICE PRESIDENT, AND BERNARD W. STERN, RESEARCH DIRECTOR

Mr. CLARK. My name is John Clark, of Denver, Colo.

I am the president of the International Union of Mine, Mill, and Smelter Workers. On my left is Mr. Orville Larson, of Miami, Ariz., who is our international vice president.

On my right is Mr. Bernard Stern, research director, who has the job of preparing the statistics that are going to be presented to the committee this morning, particularly the attached charts on the back of my statement.

I prefer to read the statement into the record, if you do not mind.

Mr. WIER. Proceed.

Mr. CLARK. My appearance here today is on behalf of the vast majority of United States workers in copper, lead, and zinc mines; mills, smelters, and refineries, who are represented by the International Union of Mine, Mill, and Smelter Workers.

Our members, naturally, have a vital interest in this legislation. They have consistently, since 1941, supported the enactment of a Federal mine inspection act for metal mines—similar to the proposals now contained in H. R. 1240 (Saylor, Pennsylvania), H. R. 3394 (Kelley, Pennsylvania), H. R. 3639 (Metcalf, Montana), and H. R. 4111 (McConnell, Pennsylvania). We, today, are again urging that this committee recommend the passage of this type of legislation.

We deeply appreciate the consideration and interest shown by members of this committee in taking time from an extremely busy session of Congress to listen to the presentation of our case.

PREVIOUS TESTIMONY

This is the second occasion, within the past year, that we have been before a House committee on behalf of a mine-inspection bill. During September and December of last year, 22 members and officers of our union appeared before sessions of the House Labor Subcommittee on Mine Safety in support of bills that were identical to those now being considered by this committee. At hearings held in Butte, Mont., and in Washington, D. C., we presented comprehensive testimony on conditions within this industry that, in our opinion, justified the passage of this legislation.

We do not now propose to burden this record with a repetition of that testimony. Members of this committee have undoubtedly already reviewed the record of its predecessor committee, and are probably generally familiar with the material that was presented before that body. A summary of some of the major points made before the previous House subcommittee may, however, place our present testimony in proper perspective.

Our earlier testimony in support of this legislation was based on these main considerations:

1. Industrial diseases and accidents in this industry persist at an abnormally high rate, despite advances made in our knowledge of causes and in engineering methods of control, and contrary to the general trend of other industries.

2. The inability or unwillingness, in many cases, of State agencies alone, to cope with the situation, requires Federal legislative action to meet the needs of the situation.

We buttressed these arguments with extensive factual testimony bearing on conditions in various mining areas and throughout the industry as a whole.

Both the trend in accidents and the persistence of silicosis, we claim, is related to the glowing mechanization within the industry. In underground mining, various witnesses emphasized, we now have greater use of block-caving, faster drilling machines, mechanical loaders, automatic conveyer belts, and much faster handling of ores and materials. The emphasis on greater speed of production inevitably means more dust and more accidents. The older methods of control no longer seem adequate for these new conditions.

OPPOSING ARGUMENTS

We want to devote the major part of our testimony today to consideration of some of the main arguments that have been advanced against this type of legislation. In the course of considering these

objections, we will have occasion to update some of the factual data that has been previously presented.

We have carefully reviewed most of the literature on this subject, as well as testimony presented in opposition to this legislation. The case against this type of legislation, in essence, boils down to the claim that conditions in metal mining are dissimilar to those in coal mining and, therefore, do not warrant a Federal inspection act.

The original Coal Mine Safety Act of 1941, after which these bills are patterned, was enacted (it is contended) because of the unusually high number of disasters in coal mines. That situation, we are told, is not found in metal mines. It is further argued that both frequency and severity rates in noncoal mines are greater than those of coal mines.

These arguments, as we will show, are built upon gross distortions of some slight measure of fact.

We don't have as many disasters, involving numbers of men, in metal mining as in coal mining. We don't have—at least to the same extent—explosions and fires caused by methane gas and dusts. We do have, however, many other fatal accidents which, in total, are at a rate not significantly lower than in coal mining.

Any experienced mining engineer will tell you that the cumulative effect of frequently recurring fatal accidents can be a much greater cause of concern than the disasters involving larger number of men. The disasters make the headlines but the constantly recurring fatalities kill more men and reflect a more serious chronic situation.

FATALITY RATES

We have an extremely serious accident situation in metal mining. The available evidence shows that—

1. Fatality rates in many sections of the non-coal-mining industry are greater than in coal mining.

2. Of even greater concern to us—and a matter that should be of concern to Congress—is the fact that, whereas the trend of fatality rates in coal mining during the post-World War II period have been moving significantly downward (mainly, we believe, because of activities of Federal inspectors), there has been a decided upward trend in such significant branches of metal mining as copper mining and lead-zinc mining.

We have with us the factual evidence that supports these contentions.

Our first chart, "Fatality Rates. 1950–54. Metal Mining and Coal," compares the 5-year fatality rate for coal mining with the major categories of metal mining. These are 5-year frequency rates showing the number of fatal accidents that have occurred in each of these industries per million man-hours of work during this period. At the time this and our other charts were prepared, the latest data issued by the United States Bureau of Mines for metal mining was for the year 1954; we have accordingly limited our comparisons to periods ending in 1954, even though figures for coal mining are available for later years.

The fatality rate for the gold-silver group, it will be noted, is significantly higher than for coal mining. The miscellaneous group, comprising the mining of many important and vital metals, is iden-

tical with coal mining; and the fatality rate for lead-zinc mining, in which a very large number of our members are employed, is only slightly lower than the coal-mining rate.

The fatality rate for copper mining appears to be appreciably lower, but this can be misleading unless it is borne in mind that this category includes open pit as well as underground mines. Open-pit mines in copper are obviously safer than underground mines, although not without their own peculiar hazards. The combining of rates for both types of copper mining conceals the much more dangerous character of underground copper mining. Were it possible to secure separate figures for underground copper mining—something we have been unable to get from the United States Bureau of Mines—we are certain that these would show a fatality rate not too different from that for coal mining and lead-zinc mining.

UPWARD TREND OF FATALITIES

Fatalities in both copper mining and lead-zinc mining, unlike coal mining, have been definitely increasing.

Our next two charts point up this conclusion. They compare the trend of fatality rates in coal mining with both copper and lead-zinc mining.

The chart, "Fatality Rates. 1947–54. Coal Mining and Copper Mining," shows that, while the fatality rate for copper mining in every year since 1947 has been below that of coal mining, the trend of fatalities in copper mining has been definitely increasing, whereas that of coal mining has been moving downward. It should also be noted that in 1954, the copper-mining rate was significantly very much closer to that of coal mining than in any previous year. In 1954, the fatal accident rate in copper mining was 0.89 deaths per million man-hours, as compared with 1.02 deaths for coal mining.

In lead-zinc mining, as our next chart shows, fatalities per million man-hours have, in many years, exceeded that for coal mining. Again, here, as in the case of copper, the much more significant fact is that fatalities have been moving upward in contrast to the downward trend in coal mining.

These trends in both copper mining and lead-zinc mining are definitely related, we believe, to the greatly increased mechanization, without Federal inspection, that has been common in this type of mining throughout the postwar period. We have confined our comparisons to the period beginning with 1947, so as to eliminate those unusual and abnormal factors that characterized mining during the war and in the first postwar year of 1946.

Our case for a mine-safety bill is based primarily upon the economically more significant group of metal mines in which our members work. For these mines, as these charts show, there is little basis for any broad generalizations about the relatively safer conditions in metal mining as compared with coal mining.

FREQUENCY AND SEVERITY RATES

The further point is frequently made that frequency and severity rates of all types of accidents, fatal and nonfatal, are generally lower in metal mining than in coal mining. Here, again, the facts do not support any such contention.

Since the United States Bureau of Mines does not compute severity rates for different types of mining, we have been compelled to resort to figures issued by the National Safety Council, a private organization, that issues annual accident data based upon reports received by them from individual companies.

The latest available comparative figures for underground mining and all United States industries are contained in our last exhibit. These figures show that—

1. The frequency rate for underground metal mining is second only to anthracite mining and is still significantly higher than the rate for all coal mining.

2. The frequency rate for metal mining is nearly four times the rate of all United States industries.

3. The severity rate for metal mining is below that of coal mining, but still very much higher than that of most other industries—in fact, about 4.4 times the average for all United States industries.

Here, too, there is little room for complacency in any of these figures. We have, let me repeat, an extremely serious and growing accident problem. This problem is not being adequately dealt with by existing State agencies. The State agencies alone, we believe, cannot do this job. We don't, for a moment, question their sincerity—the plain fact is that they have neither the staff, facilities, nor power necessary for this job. Federal mine inspection would not, we believe, supplant existing State agencies; it would merely supplement and extend existing mine inspection services.

SILICOSIS AND INDUSTRIAL DISEASES

There is another extremely important difference between metal mining and coal mining that is commonly ignored by those opposed to Federal inspection in metal mines—namely, the relatively more serious industrial disease problem, and in particular, silicosis, in metal mining. Without, in any way, trying to minimize the seriousness of industrial diseases in coal mining, available facts show that it is a larger and more serious problem in our branch of mining.

We referred, in the earlier hearings to a study by Miss Victoria M. Trasko of the Occupational Health Field Headquarters, United States Public Health Service, on the prevalence of silicosis in the United States.

That study is one of the most significant contributions to the clarification of the silicosis problem that has been made in many years. Miss Trasko found—in an extensive review of workmen's compensation records—10,362 cases of silicosis in the 5-year period, 1950–54, that have been compensated or reported in 1 form or another in 22 States. She, herself, concluded, "This is a lot of silicosis for these times."

Miss Trasko found that 2 out of every 3 cases came from the mining industry. The largest number of cases, in proportion to the size of the work force, came from metal mining.

She further found that, contrary to popular belief, silicosis is still developing among "younger men with recent and short exposure to dust," although most of the cases appear to be the result of exposure prior to 1935.

She also noted—a conclusion which the experience of our members amply confirms—that the 10,362 cases, on which information was gathered, "are obviously an understatement of the real situation."

Passage of the Federal mine inspection bill, as we have already observed, would lead to the adoption of uniform nationwide dust control standards binding upon all operators. It would also result in the development of a body of qualified inspectors chosen on the basis of merit and trained and equipped to conduct the necessary dust investigations. That, in itself, would be a very significant bit of progress.

At the present time, the only dust control standards observed in most States are those which the companies themselves choose to employ. Only a few States specify maximum permissible dust counts for mines, and these are not uniform. Only one State—Arizona—so far as we know, employs a mine dust engineer and in practically all other States, there is neither the equipment nor the necessary trained personnel to carry on such necessary investigations.

The wide differences that now exist in State mine safety laws serve to give many mining operators definite cost advantages over their competitors in other areas. The passage of a Federal mine inspection act would thus remove the possibility of using unsafe conditions as a competitive cost factor in the industry. Making mines safer is, we know, an expensive business and operators, in States where laws are inadequate or poorly enforced, enjoy a distinct cost advantage through not having to install proper safety devices.

THE RADIATION HAZARD

There are additional important factors warranting Federal inspection of metal mining. Within recent years, we have been made uncomfortably aware of the definite existence of a new type of hazard, the extent and scope of which is not yet fully understood. A definite radiation hazard has been shown to exist in the new uranium mines of the Colorado plateau region covering the States of Colorado, New Mexico, Arizona, and Utah. Numerous studies in Colorado and New York have also confirmed the existence of a possible radiation hazard in nonuranium mines. Heavy radon concentrations have also been found in metal and clay mines. Clearly, this is the type of hazard that can be adequately controlled only through imposition of Federal standards and Federal control.

A recent study of the United States Public Health Service, control of radon and daughters in uranium mines and calculations on biologic effects, reports, among other things:

> Surveys of Colorado Plateau uranium mines have shown that 65 percent of the miners were exposed to concentrations of radon and its daughters comparable to those reported to exist earlier in European mines. Extensive control measures will be necessary to reduce these concentrations to the suggested working level—

and later—

> * * * In the uranium mines where ventilation is present, it is in most instances inadequate, often used only occasionally or after blasting, and is seldom delivered at a point close enough to the working face to be effective.

The United States Public Health Service, in cooperation with several State agencies, has been conducting a virtually continuous survey

of workers engaged in uranium mining. It is generally acknowledged that several years of study will be required before any adequate conclusions as to the scope and significance of the hazard can be made. The fact that, despite the recognized seriousness of the danger, many mines today are either unwilling or unable to apply the necessary control measures suggest a strong need for Federal intervention in this field.

There is also an obvious need for the establishment of reasonable maximum allowable concentrations of radioactive dusts in nonuranium mines. Here, too, the initial work in this field can be done by the United States Public Health Service. The observance of whatever standards may be established, however, involves far too many serious consequences to be left to the present inadequate facilities of most State agencies.

MINE-MILL'S GENERAL PROGRAM

An overall approach to health and safety problems in metal mining and related industries would, we believe, require more than just a Federal mine inspection act.

We realize that the original basis for these hearings has been the various bills proposing mine inspections in noncoal mines which were introduced in this session of Congress.

We also believe that an understanding of how this proposal fits into our general program for congressional action on general health and safety problems in this industry might be helpful to this committee. Without now taking the time to elaborate on these other proposals, we would like to submit them for the record.

In addition to the enactment of a mine inspection act, our program calls for the following:

1. Establishment of a National Occupational Health Center in the United States Public Health Service to promote, conduct, and coordinate basic and applied research on industrial diseases.

2. A program of joint surveys of the health and working environment of metal mines, smelters, and refineries by the United States Public Health Service, the United States Bureau of Mines, and the appropriate State health agencies in all the key metal-producing areas of the United States.

What we have in mind is the kind of study that was last done in Utah in 1939, the results of which appeared in a report, Working Environment and the Health of Workers in Bituminous Coal Mines, Nonferrous Metal Mines and Nonferrous Metal Smelters in Utah, 1940.

3. Federal promotion of improved State compensation laws through passage of a bill such as H. R. 2622, introduced by Mr. Metcalf in the 1st session of the 84th Congress. This bill would provide, among other things, for Federal payments to States to enable them to make more adequate compensation payments for disability or death from silicosis. In return for these payments, the States would be required to meet minimum standards in their compensation laws and industrial hygiene services.

We know that any proposal for Federal regulation in health and safety matters will be inevitably met with the familiar cry of States

rights. We also know that many operators prefer to have us fight these issues out again and again in the separate State legislatures.

Well, we are not neglecting the State legislatures. We have been engaged in a continual campaign for years—in all those States in which we have members—for improved workmen's compensation laws, better mining codes, improved health services, and other like measures. But this is not solving the problem. Even where improvements have been made, the effect is frequently to give an unfair advantage to operators in other States, the laws of which are more lenient and do not require similar standards.

In the meantime, men are being maimed and are dying of silicosis and accidents because of the lack of any nationwide standards that all operators should be required to observe.

We strongly urge that this committee approve legislation which will reverse this situation.

I would like to state to the committee that I particularly am interested in the silicosis part of our appearance before this committee. I would like to state that I have worked underground for many years as has Brother Larsen and we know firsthand and factually what conditions are. I cannot help but say that due to progress and due to the operators some of those conditions have been, to a certain extent, eliminated or alleviated. I know in working in the mines, when I worked there, that we had no such thing as a waterline, water machines, or slacking of dust. We were working on grime machines and our holes were dry and places were filled with silicotic dust. In our cuts and lifters we had to use water to throw the mud out of those holes to keep the holes clear. The advancement of progress brought in waterlines and, because of the progress in mining, it has speeded up production in mines which is still creating the hazards of silicosis.

Blasting in the mines on shifts naturally shakes up the ground. Whether you are walking in drifts or stopes or working in raisers, that blast shakes a certain amount of dust from the back or sides, and men naturally have to breathe that dust. It is because of this, and because we know that silicosis has not been adequately conquered, we know that younger men going into the mines still get silicosis, or as we call it in the mining vernacular they get their lungs dusted.

In a few years time, those men are out of jobs because they cannot compete with any other worker in any other industry. I think it would be well if the committee or anyone interested in this type of legislation, could take a trip or walk through some of the mining camps where our members are working. Take a walk through Butte. I was through Montana just a few days ago and up into the mining camps of British Columbia, and it only needs a layman to know, in meeting miners on the street, that there are many of them suffering from this dread disease of the mines.

If you go into Gallatin, for instance, in Montana, where silicosis and tuberculosis patients are sent, those places are crowded without any chance of any denial of this.

They are crowded and there is a waiting list for men who are suffering from silicosis to get into those particular hospitals. The same applies, of course, in the coeur d'Alene and other mining districts. That is why we feel that through the years this has been prominent in people's minds and has been brought before Congress on numerous

occasions, and we feel that now is the time that something should be done in order to try to combat this terrible disease.

Our graveyards—and this is undeniable, too—in Utah mining camps, in Montana mining camps, in the Quarter Lane mining camps, in the Arizona mining camps are pretty well full of men who have died from this disease. Not only that, in our research work and through medical research, we also know that from this dread disease come other diseases. There comes cancer of the lung and other fearful things or fearful diseases that people do not like to talk about. You also get heart disease, when your lungs get so that they are full of dust and which is impossible to get rid of under any medical attention, and then the shortness of breath comes and heart disease or diseases of the liver are a part of this dread disease.

Our workers know that, Mr. Chairman, and they are fully acquainted with that. It is because of that that we are losing many, many men in the mining industry. We are losing a type of craftsman—and they are craftsmen—since a miner is one of the highest-type craftsmen in the country, because to work in the mines they have to know how to drill around, timber ground, to know when ground is unsafe or safe, and to get out production a man must be the highest type of craftsman. We are losing that type of man. Men are not going into the mines because of the silicosis danger and because of the accident rate. If they go into the mines, they do not stay in very long.

I speak, of course, from experience. As I said, I put nearly 14 years underground in the mines and many years in the zinc and copper smelter. I know firsthand what these conditions are and, as I say, we have been fighting for many years in order to improve these conditions.

We feel now it is necessary for some Federal legislation in order to help to control the environment, or diseases of the environment that our people work in.

I want to thank the committee here for granting us time before them. We appreciate it and I am sure our membership throughout the country, throughout the United States and our jurisdiction, will appreciate the time that you have given us and the time that we have had to present our case to this committee.

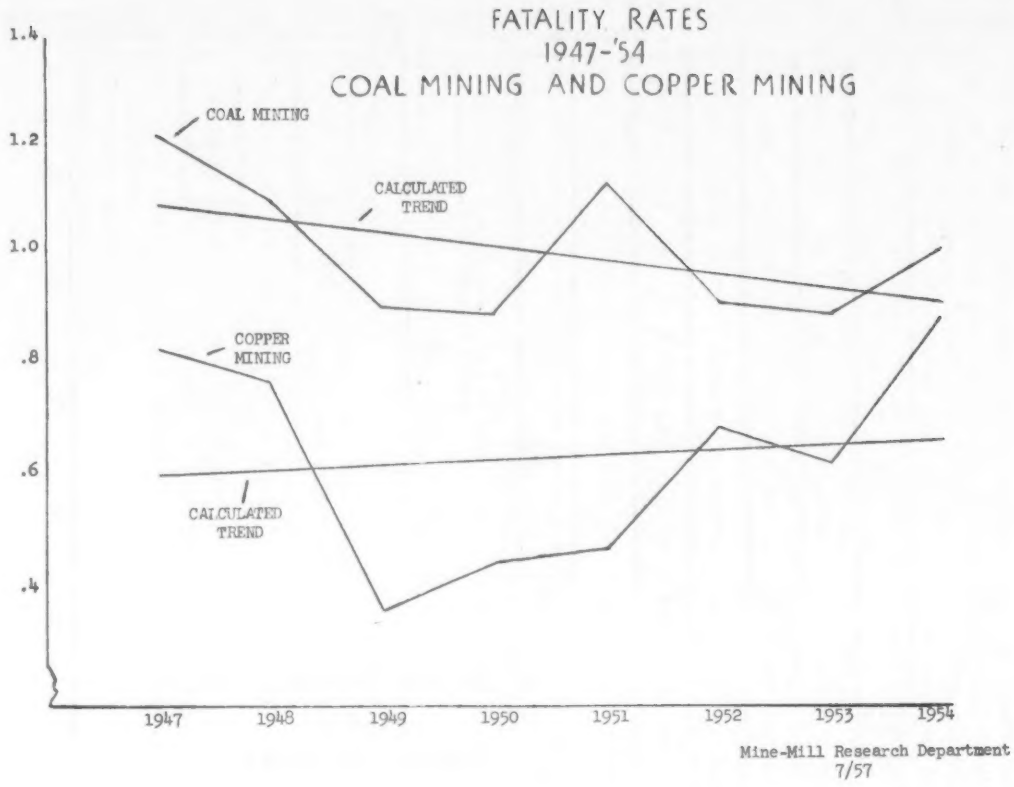
I say that we thank you and we appreciate it.

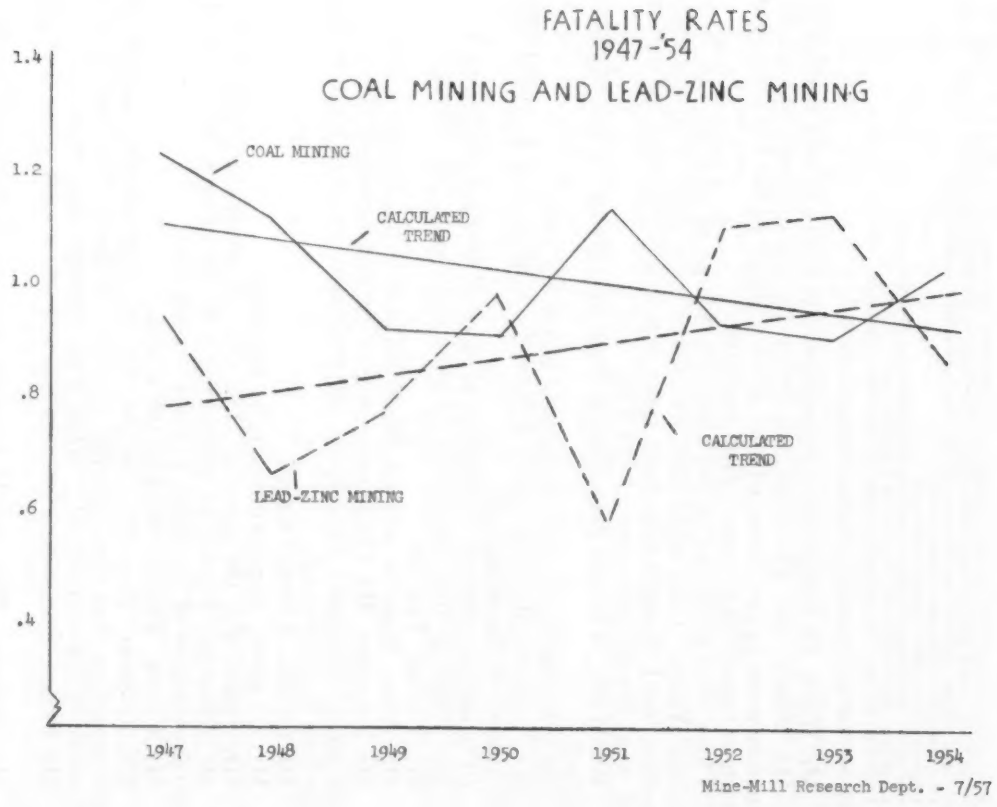
If there are any further statistics or information that you would like on this very vital subject, we would be very glad to present that information to you.

Thank you very much.

(The charts referred to follow:)

1/ - Includes antimony, bauxite, chromite, cobalt, manganese, mercury, molybdenum, pyrite, titanium, tungsten, and vanadium-uranium.


FATALITY RATES
1947-'54
COAL MINING AND COPPER MINING
1.4
1.2
1.0
.8
.6
.4
COAL MINING
CALCULATED TREND
COPPER MINING
CALCULATED TREND
1947
1948
1949
1950
1951
1952
1953
1954
Mine-Mill Research Department
7/57


FATALITY RATES
1947-'54
COAL MINING AND LEAD-ZINC MINING
1.4
1.2
1.0
.8
.6
.4
COAL MINING
CALCULATED TREND
CALCULATED TREND
LEAD-ZINC MINING
1947
1948
1949
1950
1951
1952
1953
1954
Mine-Mill Research Dept. - 7/57

Frequency and severity rates, 1953–55 [1]

	Frequency [2]	Severity [3]
All industries [4]	7.21	827
Mining, underground, coal [5]	24.81	5,845
Anthracite	73.23	9,757
Bituminous	17.46	5,252
Mining, underground, except coal [6]	26.41	3,914
Metal	28.51	3,617
Nonmetal	20.44	4,755

[1] The 3-year period 1953–55 is used because this is the latest period for which rates are available for coal and metal mining, although later figures (1954–56) are available for other industries.
[2] Accidents per million man-hours of work.
[3] Time lost per million man-hours of work.
[4] Based on reports of 9,315 companies to the National Safety Council.
[5] Based on reports of 93 companies to the National Safety Council.
[6] Based on reports of 201 companies to the National Safety Council.

Source: National Safety Council. Accident Facts, 1956 and 1957.

Mr. WIER. Do either one of your associates desire to add anything?

Mr. STERN. Mr. Chairman, in order that the committee might acquire some appreciation of just what silicosis is, we have brought with us two slides known as Goff sections.

These were prepared in the Curative School of Medicine in New South Wales. I am sorry that we cannot leave them with the committee, but I thought that from them you would get some indication of what the silicotic miner looks like.

Mr. WIER. Will you please bring them up here so we can examine them?

Do your associates wish to present anything more?

Mr. LARSON. Mr. Chairman, I have an exhibit that I would like to present to the committee.

(The exhibit referred to appears at close of witness' testimony.)

Mr. WIER. Is that the extent of your testimony, Mr. Clark?

Mr. CLARK. Yes, sir.

Mr. WIER. Then we will ask Mr. Zelenko if he has any questions.

Mr. ZELENKO. Mr. Clark, can you give me just a general idea, without going into exact figures, the approximate, average wage of the workers in your union?

Mr. CLARK. Average wage?

Mr. ZELENKO. Approximately, by the year.

Mr. STERN. For the miners? Did you ask about the miners?

Mr. ZELENKO. Instead of restricting it to the miners, let us say all of the members of the union in their various jobs.

Mr. CLARK. That is about $5,100 a year.

Mr. ZELENKO. Can you also give me the approximate amount of compensation that these people receive? I know that you have a number of States involved. What is the average compensation?

Mr. STERN. Somewhere between $35 and $40 a week when they get it.

Mr. ZELENKO. That would be about between $1,800 and $2,000 a year. You are giving me an average, but some of the compensation is much lower or nonexistent and some is a little higher?

Mr. STERN. That is right.

Mr. ZELENKO. Those people are family men with a great many children. I would now like to ask you this: Approximately what is the working span of life of these people, in this industry?

Mr. CLARK. Anywhere from 10 to 20 years. In some cases, it was brought to my attention this morning, that in the parts in Utah where silicosis is particularly prevalent, I think the expected life span of a miner there was about 10 years.

Mr. LARSON. It depends on the mine and the makeup of the ore in the mine. A mine with a lot of rock in it, the life expectancy is much shorter. It might even be 5 years, as a matter of fact, and that is not impossible.

Mr. ZELENKO. So the fact that some people may be more susceptible than others is also involved?

Mr. LARSON. That is true.

Mr. ZELENKO. That shortens their working life span?

Mr. LARSON. That is true.

Mr. ZELENKO. Many of these men are young men and if they come out crippled, they can no longer obtain employment and they are going into a very hazardous and dangerous occupation which does not last too long in any event?

Mr. LARSON. That is right.

Mr. ZELENKO. Would you say a man has to be pretty lucky to last out 20 years, if he does not get hurt in any other way, to withstand the ravages of silicosis?

Mr. CLARK. That would be quite true.

Mr. ZELENKO. May I ask you briefly, who are those who are opposing this very constructive legislation?

Mr. CLARK. We have heard, of course, of some of the opponents this morning in the statement put in the record by the chairman; namely, the chamber of commerce and parts of the Mining Congress. They certainly seem to be in opposition to this type of bill.

Mr. ZELENKO. Would you say that the opposition generally is from people from far away from the mines themselves, and not actually cognizant of the working conditions?

Mr. LARSON. That is true.

Mr. ZELENKO. I want to know if part of the opposition stems from people who, let us say, have no actual knowledge, or whether they are people or groups who have actual knowledge of these dreadful conditions?

Mr. LARSON. Of course, the chamber of commerce certainly does not know anything about a mine. I do not think so, maybe they do. I have my doubts, but the operators themselves oppose Federal legislation; and, as a matter of fact, the American Mining Congress is on record as being opposed to Federal legislation. Their position is that it can be handled by the States individually.

Mr. ZELENKO. From your research and from the information we have, apparently many States are reluctant to proceed with a program of that kind. That is why you feel there is some need for Federal legislation?

Mr. LARSON. That is right.

I would like to point out, Congressman, that this last year most of the State legislatures in the metal-mining States met and not a single State passed or approved any legislation dealing with silicosis. Not a single one, and we were in every one of those States attempting to get some relief in the form of State laws.

Mr. ZELENKO. Let me ask you this: Approximately how long does it take for a man to serve his apprenticeship or learning period to become a journeyman miner or worker in this industry?

Mr. CLARK. It is impossible for him to start right in and be a miner. He must be broken in by an older miner. I know, again referring to myself, that was the hard day when we had the piston machines. We did not have the water lines or jackhammers. I know that. I am not very dumb but I know that it took me quite a long time before I got onto mining. It is a complex job. You not only have to know how drive drifts, raisers, but you have to know how to stope and timber, and these later years when mining has got to be difficult in block caving and that sort of thing, you have to have a lot to learn. In the first place, a man working in some of these stope mines, it is quite an education to get into the feel of the ground, whether it is safe, whether it has to be timbered, and so on. I would say that no man, unless he serves in a mine under all of these conditions and all types of work to be done in the mine—it takes a few years before he is a competent miner and before he is what we call a boomer miner and can get a job in any mine, and can do the job.

Mr. ZELENKO. The reason I asked you that is this: Apparently the health and welfare motive has not impelled legislative action or removed the opposition of the operators themselves. I am looking into this to see whether from a profit or monetary standpoint they have not taken a short-sighted view of this. It is a loss of money in this type of business, is it not, to break in a new man, to have an experienced man become sick and go out?

Mr. CLARK. Each company sets a certain amount of money aside to break in a new miner. There are scales for that, but each company does set a certain amount aside to break in a new miner.

Mr. ZELENKO. I have no further questions.

I would like to compliment you and your associates on what I consider to be a most constructive and forward looking statement, Mr. Clark. I shall support this legislation because I think the health and welfare of any particular citizen in any State involves all of us. In view of the fact that the State legislatures have not seen fit to act, I think that on the basis of the health of the citizens of the United States, it is important for us to enact this into law.

I repeat that I shall support it.

Mr. WIER. Mr. Bosch?

Mr. BOSCH. Mr. Clark, can you give me any idea as to the absenteeism of the men in your industry?

Mr. CLARK. That is pretty hard to gather that kind of a record. I know that in places that I am acquainted with in Butte, particularly, the absentee record is pretty high. If you realize what a man has to go through in those mines where they are thousands of feet deep, where they have to have air blown into them to the face, if you stand in the face without that air being blown in, pretty soon even the rubber boots that you are wearing are filled with perspiration. You do not wear undershorts or anything. It is so hot that just standing there you can feel the heat.

Many times there is not adequate air being forced into those places. It is just because of those conditions generally that men do not feel

like staying underground the length of time that they should. They lay off sometimes 1 and 2 days a week. We have other men who have stayed quite steady at it. We have a lot of absenteeism in the mines.

It was brought to our attention every time we negotiated contracts, particularly, and I would like to say this: During the war, I served on the selective service board for 7 years. That was in the smelters and we have had to build a program in order to combat absenteeism. I think that we did a wonderful job in it, but it shows the trend of the man working in the mines or smelters is not to work a full week at any time. What the record is, what the number would be, that I just could not be able to give you.

Mr. BOSCH. In other words, your answer is that is it a very heavy absenteeism?

Mr. CLARK. Yes, sir.

Mr. BOSCH. Mr. Clark, the testimony taken by the subcommittee of the 84th Congress is abundant with statements of greatly improved relationships between management and labor in the various stages of improving safety regulations and handling safety problems. Testimony indicates that in many States management and labor have gotten together with regard to first aid training, periodic safety inspections, and things of that nature.

I wonder whether you could give me your observation as to that situation, as far as your experience is concerned?

Mr. CLARK. I think that in some of the statements made that things have advanced, and because of the employer or employee taking some activity in this field. There is no question about it that since the days that I started in the mines and today, there has been much advancement in the protection and trying to eliminate or change conditions. We agree on that, but we think the job is larger than that. We think, as a matter of fact we know, that it is impossible to alleviate these conditions on a statewide basis. We think that there is not enough concern even with the job that they are doing, not enough concern to give a miner full protection.

Mr. BOSCH. Would you agree with me that perhaps if the Federal Government got into this field that State initiative would be completely destroyed?

Mr. CLARK. I do not think so. I think what we are suggesting under this bill it would just help along with what the State agencies are doing.

Mr. BOSCH. Have you or your associates given any thought to the cost of the creation of another bureau to carry out the projects proposed in this legislation?

Mr. STERN. Congressman Bosch, I believe there was some testimony in the previous hearings by the Bureau of Mines personnel to the effect that it would be rather expensive. I do not recall the exact figure.

Of course, our position is that it is not so expensive that it is still not warranted.

We are dealing here with lives of miners. We have passed this type of legislation in the coal mines. We have found that it appears to work there, and it certainly seems to be well worth whatever it might cost.

Mr. BOSCH. Thank you very much.

I have nothing further.

Mr. WIER. Did you review the testimony that the Bureau of Mines representatives and the representative of the Public Health Department gave at one of our recent committee hearings?

Mr. STERN. I do not believe we have had an opportunity to go over that. Of course, we were present when they testified at the previous hearings.

Mr. WIER. I believe it is possible for you to get a copy of their statements which covered some of the questions asked here today regarding progress, particularly the review of the Department of Health. They gave us their findings, and they admit, too, that you have a serious problem and the death of one of the miners from silicosis is one of the worst types of deaths because of his struggle to get his breath.

If you get a copy from the clerk I think it might be quite helpful.

I think you are quite aware that in both of those cases they are not ready for Federal inspection.

If that is all, we have Mr. Burke here representing the steelworkers.

I want to say to you, Mr. Clark, and your associates and your delegation, that I hope you resolve your zinc and lead problem here and get your people back to work, and I want to extend the thanks of the subcommittee to you and all of those who attended this morning to present the problem from what we call the rank and file point of view.

Mr. CLARK. Thank you, Mr. Wier.

(The exhibit referred to earlier in witness' testimony follows:)

HANCOCK, MICH., *July 31, 1957.*

ORVILLE LARSON,
Vice President, International Union Mine, Mill and Smelter Workers,
Hamilton Hotel, Washington, D. C.:

Please be advised another accidental death has occurred in upper Michigan copper mines yesterday. John Perala C. & H. miner, was killed. Perala was third mine-accident victim in the past 3½ weeks. Norman Dexter, of White Pine, was killed July 6. Douglas Meyers was killed July 26. Mr. Larson, please present this evidence to the House Labor Committee now holding hearings on mine safety where the Mine, Mill and Smelter Workers Union is urging Federal legislation to protect the life and limb of copper and nonferrous metals workers.

J. R. MCCURDY,
RUSSELL JOHNSON,
ANGELO BARBERIS,
JAMES SPAGNOTTI,
ROBERT SUNDBERG,
CHRIS MOEHRKE,
VICTOR HENDRICKSON,
CHARLES KOPP,
C. & H. Workers.

Mr. WIER. Mr. Burke, you may come forward, and if you have any associates with you you may bring them forward.

STATEMENT OF FRANK BURKE, DIRECTOR OF SAFETY AND HEALTH OF THE UNITED STEELWORKERS OF AMERICA

Mr. BURKE. My name is Frank Burke, director of safety and health of the United Steelworkers.

To my left is Joseph McDonald, associate legislative director.

To my right is Mr. Alex Christie, associated with our legislative department here in Washington.

Mr. WIER. Before you proceed, Mr. Burke, I do not know whether you were here when I made a brief résumé of the activities of this subcommittee.

I merely stated that this subcommittee of the Education and Labor Committee is the legislative committee. It is our responsibility to either find agreement with you or to find disagreement on the legislation that is in our hands.

The Metcalf committee was the committee which went out to make an investigation and make findings and to make a report of their findings, which we have all received.

Therefore this is the committee which will give consideration to the 4 or 5 bills which are in our jurisdiction at this time.

Mr. MCDONALD. Mr. Chairman, before you get into Mr. Burke's statement, there will be another gentleman who will appear on the scene. His name is the Honorable John Saylor, from Pennsylvania.

Mr. WIER. That will be his first appearance before our committee.

Proceed, Mr. Burke.

Mr. BURKE. Mr. Chairman, the Subcommittee on Mine Safety and Health Inspections and Investigations of the Committee on Education and Labor in the 84th Congress, 2d session, held on-the-spot hearings in Virginia, Minnesota, Duluth, Minn., Ouray, Colo., and in Butte, Mont., with 3 days of hearings here in Washington.

I feel that a sufficient record has been compiled so that your subcommittee can report favorably to the Committee on Education and Labor, on one of the several bills before the subcommittee. Either H. R. 1240 or H. R. 3394 will serve the purpose and be a good start toward the safety aspirations that you gentlemen have in mind.

There is no point in my going over some of the previous testimony already rendered. That would serve no purpose, but there are several points that I would like to comment on. When these bills were being prepared the advice and counsel of the Bureau of Mines was sought and obtained as to what should and should not be included in this mine-safety bill affecting the metallic and nonmetallic mines.

As you know, the Bureau of Mines has no power of inspection in these mines. They have such power where anthracite and bituminous mines are concerned.

Sections A, B, C, D, and E of the mine-safety bill provide that mineowners or their agents shall supply the Bureau of Mines with information relative to health and safety conditions in these mines. Data shall be supplied as to the causes of accidents involving bodily injury or loss of life therein, or the cause of occupational diseases originating therein, as a basis for determining the most effective manner in which the public funds made available for the protection or advance for health or safety in metallic or nonmetallic mines, and that these data shall be transmitted to the Congress for consideration in legislative matters involving health and safety conditions, accident, or occupational diseases in metallic or nonmetallic mines.

This reporting by mineowners to the Bureau of Mines was included in this mine-safety bill, because the Bureau advised that their present data were incomplete as far as the overall health, safety, and accident picture was concerned in the metallic and nonmetallic mines. I have mentioned this fact because in reading the record it appears that the Department of Interior is opposed to this mine-safety legislation.

It attempts to convey to all concerned that there is no need for this legislation. The Secretary of the Interior makes this statement despite the fact that this bill was prepared with the assistance and guidance of the Bureau of Mines. The data were incomplete. In order to perform an adequate job and compile complete data it was necessary to insist that the various companies should report at least once a year to the Bureau of Mines. I want to clear this point. As far as I am concerned either the Bureau of Mines has adequate data, and if such is the case there is no need for this provision in these mine-safety bills, but I believe the record compiled by your subcommittee proves beyond a shadow of doubt that there is definitely a need for these provisions requiring that the companies report to the Bureau of Mines.

On page 271 of the hearing, the former Assistant Secretary of the Interior, Felix Wormser in stating his opposition to these bills states as follows:

> Like the act of May 7, 1941, H. R. 9269 contains no powers of enforcement. Compliance with recommendations evolving from inspections would be purely voluntary. The only compulsory aspects of H. R. 9269 are the right of entry to make inspections and requiring the companies to report all accidents involving loss of life or bodily injury.

Mr. Chairman, compulsory powers were not asked for nor were they sought after because it was thought best to try the voluntary approach. I am quite sure that the mining companies will cooperate with the Bureau of Mines. I have more faith in them than apparently Mr. Wormser does. I see no need for any compulsory provision in these bills.

On page 573 of the hearings Mr. Metcalf and Mr. Johnson, of the Bureau of Mines, engaged in the following exchange:

> Mr. METCALF. You do not make it a practice to go only into a mine when you are invited by the mineowner?
>
> Mr. JOHNSON. No.
>
> Mr. METCALF. You would institute an investigation if from some other source you felt that there was need for an investigation into an unsafe or a hazardous condition?
>
> Mr. JOHNSON. Usually in our work in metal and nonmetal mines, our field staff is spread quite thin. We teach first-aid classes and mine-rescue classes and accident-prevention classes, and we attend safety meetings and we give out safety awards, and conduct demonstrations on various safety hazards, and so forth. When our men are around these mines and have a few hours to spare, they will ask permission to go into a mine and see what is new in that mine, and they are always welcome and we never have been refused.
>
> Then, occasionally, if they see something that looks like a hazard they will discuss it right on the job with the foreman or the management or whoever is with them. We don't have enough men in that work to go in and make inspections similar to what is made in coal mines. We don't do that. We have to make it in cases, where if you had an unusual type of accident, or probably 2 or 3 men killed in an accident, then we will proceed to the scene of that accident immediately and make an investigation and write a report.
>
> Mr. ELLIOTT. If you were not allowed to go into the mine, you couldn't go in and make that investigation?
>
> Mr. JOHNSON. That is right.

Mr. Chairman, in reply I would like to state the following: Mr. Johnson makes the point that the field staff is spread quite thin. He also emphasizes the fact that the Bureau also teaches first-aid classes, mine rescue, and accident prevention. He states that when the men have a few hours to spare, which is apparently not too often, they

will ask permission to go into a mine and see just what the conditions are in that mine. No one will deny that the field staff of the Bureau does a first-rate job in first-aid and where other similar activities are concerned. Would not the good work of the Bureau be augmented and helped by inspectors once a year inspecting these mines to see just what conditions actually are?

Through periodic inspections the Bureau could certainly render an outstanding service to safety in these mines through regular inspection. The Bureau does not have enough personnel at present to conduct the inspection called for in this bill. That is not to say that this situation cannot be remedied.

Nothing can take the place of an on-the-spot inspection of a mine. With inspectors making periodic inspections the Bureau can then certainly divert the accident-prevention work into the finding or the data that it learns from these inspections. In that manner it would certainly render a real contribution in cutting down the rate of accidents in the metallic mines. The mine management who is safety minded has nothing to fear from the provisions of this bill. The fact of the matter is with the Bureau of Mines making inspections into the mine once a year this could augment the safety work being done in the mine by the company. Perhaps the inspector through his recommendations and extensive knowledge of safety conditions in the mines could make recommendations to the company that might save them considerable expense. As I have stated before, no company that is safety minded has anything to fear from the mine-safety bill before your subcommittee. The fact of the matter is that the company that is safety minded should welcome this service of the Bureau of Mines. I feel sure that this inspection linked up with the reporting by the company as set forth in the bill before the subcommittee will go a long ways toward curtailing many of the accidents that are taking place.

I hope that the subcommittee will see fit to enact one of these mine-safety bills into legislation. The miners in the metallic and nonmetallic mines are certainly in need of it.

I thank the subcommittee for the opportunity to present this statement.

Mr. Chairman and gentlemen, in addition to my statement I would just like to give some quotes from various pamphlets I have here.

The first one is a publication dated 1953, Bureau of Mines, Minerals Yearbook. It is entitled "Employment and Injuries in the Metal and Nonmetal Industries."

On page 1:

> This chapter of the Minerals Yearbook is confined to the injury and related employment experience in the metal, nonmetal, and quarry industries of the United States. Each industry is treated separately and no attempt has been made to combine data to present an overall picture for these sections of the mineral industry.
>
> Statistical data on the injury experience at metal and nonmetal mining Operations were first compiled by the Bureau of Mines for 1911. Coverage of the industry has grown considerably, and the data in this chapter of the Minerals Yearbook presents approximately complete information on the industries represented.

This is the part that I like:

> There is no Federal law that requires operators of metal and nonmetallic mines to submit reports to the Bureau such as must be supplied by the coal-mining industry.

However, the mining companies that have voluntarily furnished reports on injuries and related employment data have contributed immeasurably to the promotion of safety in the mineral industries of the United States.

I would like to quote from Hatfield Chilson, Acting Secretary of the Interior. He definitely says he is against any of these bills.

Then I want to show where Mr. Chilson is wrong.

Mr. CHILSON. Available records show that both the frequency and severity rates of accidents occurring in metallic and nonmetallic mines and quarries are considerably lower than those of coal mines. Moreover, the record of major disasters, single accidents in which five or more persons are killed, occurring in noncoal mines and quarries, is much better than the record for coal mines. The principal causes of major disasters in coal mines have been explosions of gas and coal dust, except anthracite dust which is nonexplosive and fires. The principal causes of major disasters in metallic and nonmetallic mines have been fires and inrushes of impounded water, whereas disasters in quarries have been caused principally by slides of ground and blasting.

The foregoing is cited to show that the conditions leading to the adoption of legislation authorizing Federal inspection of coal mines do not exist to the same degree for metallic and nonmetallic mines and quarries.

Later on in this memorandum he states that the Department of the Interior does not support the bills.

Now I want to take a document, accident facts, 1957 edition of the National Safety Council.

Mr. Chilson's memorandum is dated April 26, 1957, incidentally.

On page 26 of the National Safety Council's pamphlet on accident facts, the 1957 edition, I will drop down to the bottom of page 26 to see whether Mr. Chilson knows what he is talking about.

Mining other than coal: Their frequency rate is 19.93 plus.

Who is next to that? Lumber. Their frequency rate is 22.32.

Who is next to lumber? Two spaces away we see coal mining, with a frequency rate of 23.07 plus.

Now let us go over to the other side of this same page 26, severity rates.

Again we drop down to the bottom of the page. Mining other than coal, the severity rate is 2,290 plus.

Below them we have construction, severity rate 2,375.

Below them you have lumber, 2,436.

Below them you have quarries, 3,136 plus.

Last you have coal mining, 5,770 plus.

I would not, Mr. Chairman or gentlemen, consider that quite an improvement or much below coal mining. Severity rate, mining other than coal, was just one space away from coal mining.

I repeat, mining other than coal frequency rate was 19.93 plus. Coal mining frequency rate is 23.07 plus.

I don't think, Mr. Chairman, that that is a considerable amount of difference.

As I had told the previous subcommittee, maybe the people who work in our kind of mines and quarries don't get killed by tens, twenties, or the hundreds, but I do know this: That in Pennsylvania, where I get a monthly report from the State, coal mining in our type of accidents vary. One month coal mining will be ahead and the next month we may be ahead.

I admit, Mr. Chairman, we do not have to contend with the gasses in many of our mines, but we do have explosives, and they account for a lot of our problems.

We have falls.

Mr. WIER. Would you know whether that safety rating which you are quoting includes the diseases, such as silicosis?

Mr. BURKE. No, sir. These are just injury and fatality rates.

Mr. WIER. They do not include any of the diseases?

Mr. BURKE. They do not, sir.

I might add this, Mr. Chairman, so that you and your committee will have an appreciation of how many mine operators we are talking about in these figures which I gave you.

On page 29 we have a table. As you probably know, any of the figures in this book are figures submitted to the National Safety Council by members of the council. There is nothing compulsory on the part of industry or anybody else to give the council these figures. It is done mostly by the membership of the council.

On page 29, mining except underground coal, we are talking now about 201 units; in other words, 201 members.

The 1955 rates of the National Safety Council, number of units, 201. The frequency was 19.9. The severity rate was 2,290.

The 1955 rates of the United States Bureau of Labor Statistics where the number of units is blank, they are not required or compelled in any way to report to the BLS.

The frequency rate is 37.5. The severity rate is blank.

Now we go to quarries. There are 258 units for the year 1955, and their frequency rate is 10. Their severity rate is 3,136.

For 1955, BLS, it shows blank for the number of units. Frequency rate is 35.6. Their severity rate is blank.

The other pamphlet, Mr. Chairman, which I would like to quote from, is the Miners Circular of 1954, United States Bureau of Mines, accidents from explosives at metal and nonmetal mines.

This was revised July 1956.

On page 3 we deal with explosive injury statistics.

Explosive accidents have been and still are a major cause of fatalities in metal and nonmetallic mines. Falls and slides of rock or ore, hoisting and haulage and falls of persons have caused greater numbers of fatal injuries, but explosive accidents still rank with these as one of the serious hazards of mining.

The relative percentages of fatal and nonfatal injuries from these and other principal causes for the years 1932 to 1954 are shown in table 1 in the order of the frequency of the total fatal and nonfatal injuries.

The injuries attributed to explosives in metal and nonmetal mines, underground and open cut, constitute 9.9 percent of the fatal and 0.8 percent of the nonfatal injuries from all causes.

At underground mines these injuries make up 10.1 percent of the fatal and 0.8 percent of the nonfatal injuries.

At open-cut mines they are 7.6 percent of the fatal and 1.3 percent of the nonfatal injuries.

On the next page we have a table. At the top of the table, and this is for a 22-year period:

Falls and slides of rock or ore, underground mines. Fatal, 1,043. Percentage of total, 34.2. Nonfatal, 35,076. Percentage of total, 16.1. Total of fatal and nonfatal is 36,119, a percentage of 16.4.

It shows various types of operations performed underground, for instance, handling materials.

In handling materials there were 51 fatalities. Nonfatalities were 29,902.

Hoisting and haulage, 222 fatalities. Nonfatalities was 3,556.

Mr. Chairman and members of the committee, that gives you a pretty good idea of why we are supporting the bills. I do not think

it is necessary for me to go into any further discussion of the matter because we have been here before, and I think the records will show just how we feel about this subject which is now before this committee.

I certainly hope that you gentlemen will make a favorable report on this so we may get some legislation.

Mr. ZELENKO. We are dealing with Federal legislation, and, as such, of course we do not want to interpose ourselves into State functions or State businesses, or anything that is purely intrastate, so my question is directed to you now, Mr. Burke, to find out whether we are dealing with what is an intrastate business or an interstate business.

Are most of these products used in the State where they are mined or are they used in other States, manufactured and put together in other States from the ones in which they are mined?

Mr. BURKE. Basically, Congressman Zelenko, they are used out of that State where they are mined.

Mr. ZELENKO. Approximately what percentage of these products?

Mr. BURKE. I would be safe in saying 90 percent would go out. Let us take copper, for instance. We mine the copper out in the West, taking Utah, for instance. They get the copper out of the ore at the plants right there, about 20 miles out of Salt Lake City, and various other smelters around in the area.

That copper is sent either east or west to manufacturers who will make various products out of it, such as wire and many other things.

Mr. ZELENKO. But whatever is made out of any particular metal, you would say that generally, all of these metals you are talking about, are the subject directly of interstate commerce?

Mr. BURKE. Almost completely, sir.

Mr. ZELENKO. I feel that brings us directly into the realm of Federal legislation.

Now let me ask you this, sir: It does not make any difference to the family of a dead miner, of course, whether he was killed by a slide of rock or an explosion of gas?

Mr. BURKE. That is my attitude.

Mr. ZELENKO. The suffering is just as great, is it not?

Mr. BURKE. That is right.

Mr. ZELENKO. When a miner is killed or injured, or when any other worker is injured, of course the income is lessened, and it may even become nothing. It may be lessened by compensation or lack of compensation.

The family, then, if they do not obtain other sources of income becomes a charge upon the State, dependent upon the payment of relief funds, and they become a drain, so it does hurt each State moneywise, does it not, one way or another?

Mr. BURKE. That is right.

I might say there, Congressman, that that is what surprises me about these States who oppose this sort of legislation.

They themselves are inviting burdens such as you have just described.

Mr. ZELENKO. I have indicated to Mr. Clark, who testified a moment ago, that it is my view that this is a very shortsighted view on the part of operators and State legislatures. Apparently we have not been able to reach them in any way on the basis of health. Perhaps if we can demonstrate to them monetarywise or profitwise

that this is a loss, they might go along, but they have not up to now. It is my own feeling we have to do something.

Your particular group, the AFL–CIO, of which you are health director, cannot benefit in one way or another from the enactment of this legislation. You do not get more fringe benefits, you do not get additional wages, or any other reward?

Mr. BURKE. All we do is save life, limb, and sight of people.

Mr. ZELENKO. You are here in the public interest. Is that right?

Mr. BURKE. That is right.

Mr. ZELENKO. I want to thank you, sir, for your very constructive and informative statement.

As I indicated to Mr. Clark, I most certainly favor this legislation and it has my support.

Mr. BURKE. Thank you very much, sir.

Mr. WIER. Mr. Bosch?

Mr. BURKE. Before Congressman Bosch interrogates me, might I give you gentlemen a typical example of what our experiences have been?

In the Upper Peninsula of Michigan we have large copper operations. I tried back in 1951 and finally in 1952. I went to the Michigan Legislature, and I shall read from our previous committee report just what I said to the other committee:

> If there is one point I would like to emphasize with this subcommittee, it is the fact that the various States have failed to enact adequate safety codes to protect the miners who work in metallic and nonmetallic mines. I have found that these State codes suffer from the lack of adequate appropriations, trained competent men with civil-service status, and the inevitable State politics which creep into the State political bureaus and agencies.
>
> A typical example of our experience when we presented bills to State legislatures took place in February of 1952 when we supported House bill 122 in the Michigan Legislature which would have provided for appointment of mine inspectors for copper and iron ore mines with civil-service coverage, and the establishment of a committee to promulgate safety codes, rules, and regulations for those mines.
>
> The committee of State affairs for the Michigan Legislature defeated this bill by a vote of 6 to 3. It appears to me that when it comes to protecting the safety and health of the greatest assets this Nation has, mining, of course, its manpower, too many put economic interests above the Nation's welfare and security.

That has been our experience almost everywhere.

I might comment to you three gentlemen that in the State of New York we have iron-ore mines. I think that Dr. Greenberg is doing a splendid job insofar as industrial hygiene is concerned.

I think regardless of what the political parties are in that State, both of them have tried to protect the health and welfare of the workers of that State.

When I say that I cover our iron-ore miners.

Mr. ZELENKO. Mr. Bosch and I certainly thank you. We both come from New York.

Mr. BURKE. Well, it is a fact because I know Dr. Greenberg personally.

In Minnesota, of course, you know we have a lot of iron-ore mining. Our problem there is not as great, but we just cannot pick out 2 States from 48 and say "Well, we are satisfied; we are happy" after I read you those figures of fatalities and nonfatalities. I just can't do it.

Your records are blemished. Your State records are blemished by the other 46 States or whatever they might be. I say that should not be allowed in this country.

We are asking for nothing. As Congressman Zelenko said, we stand to gain nothing as an international union. I stand to gain nothing, with one exception—the satisfaction of knowing that the people I am privileged to represent can go to work in the morning or in the afternoon or at night, kiss their kids and their wives goodby, "I will see you at the end of the shift."

That is the only satisfaction we desire—nothing else.

Mr. ZELENKO. I have no further questions.

Mr. BOSCH. Mr. Chairman, I have no questions. I would like to say that I do not think that the mere fact that the States might have additional expenses out of their treasury should be a moving spirit for this legislation.

This legislation has to stand on its own feet. I believe you made a very fine presentation and that you have given us some very serious arguments for this legislation, but I cannot agree with my colleague from New York that the mere fact it will cost the States a little bit more money is any reason for the Federal Government to get into the field.

I have no questions.

Mr. BURKE. Mr. Chairman, I have heard the previous speakers. I have attended the other subcommittee hearings. I do not think you can find in this record of the previous subcommittee where we who want this legislation have made that a point.

Congressman Zelenko asked the question. I do not think it was as the basis of the legislation, but I think every little bit helps, and I agree with Congressman Zelenko.

Mr. BOSCH. That is your privilege. I am not arguing with you on that at all, Mr. Burke. However, I do not think that the reasoning my colleague from New York gave will move me in favor of this legislation. It will stand on its own feet.

I have no other questions.

Mr. WIER. We want to thank you and your colleagues for making this presentation this morning, Mr. Burke, and for your fine contribution. We hope we can give this favorable consideration.

Mr. BURKE. Thank you, sir. I hope that Mr. Bosch will be able to find some material that will be a basis for his voting in favor of the legislation.

Thank you very much.

Mr. BOSCH. I can assure you I will give it serious consideration.

Mr. BURKE. I am sure you will.

Mr. WIER. We have the distinguished gentleman from Pennsylvania here. I believe you have a bill here?

STATEMENT OF HON. JOHN P. SAYLOR, MEMBER OF CONGRESS FROM THE STATE OF PENNSYLVANIA

Mr. SAYLOR. I have, not only in this session but in the last session of the Congress.

Mr. Chairman, in my opinion the bills to provide for the safety and to protect the health of our fellow Americans employed in the metallic

and nonmetallic mines and quarries should be favorably reported out of this committee and enacted by Congress.

The bill excludes coal and lignite mines from specified inspections and investigations to be conducted by the United States Bureau of Mines. This exemption does not in any way lessen the interest of those of us who reside in the coal-producing areas.

To the contrary, coal miners and their neighbors have a special concern in this matter. We are in a position to appreciate fully the advantage to be gained by our counterparts in mines and quarries who will be affected by passage of the proposed legislation.

The Federal mine-safety bill adopted in 1952 has not only resulted in safer working conditions, reduced accidents in the coalfields, but it has also improved the morale of the workers and reduced apprehension about their famiiles. We who supported and fought for the enactment of that bill were subjected to a great deal of criticism 4 or 5 years ago. Today the voices of those who opposed remain silent.

In the light of the safety records that have developed since the bill became law I question whether a single person would have the temerity to come forward today and ask for the repeal of that piece of legislation.

We still have a long way to go in the matter of reducing accidents. Management and labor are cooperating closely in seeking maximum safety conditions. With the Council of the United States Bureau of Mines and the State Mining Departments, we are hopeful of continued progress. There is no sound reason why our brothers in the other mining industries should not share the same opportunities for better and safer working conditions.

Coal-mining safety bills stand as a testimonial for the need for similar safeguards in the areas covered by the bills that your committee is considering.

I appeal to this committee for favorable and expeditious treatment of this measure.

Mr. Chairman and members of the committee, I want to continue to be identified with the exponents of the philosophy that the least government is the best government, but I would be the last Member of Congress to advocate legislation which would open the door to bureaucratic encroachment on private business. This bill is no such thing. It is merely the basis for the pursuance of a livelihood without the threat of unnecessary hazards to health and person. It can be the medium for the pooling of knowledge essential to the betterment of working conditions in affected mines.

It is a bill to promote standards of safety which every human being who earns a living in the American mining industry has an inherent right to demand.

I sincerely trust that this committee will favorably report this legislation.

Mr. ZELENKO. I want to compliment you, Congressman Saylor, upon your statement. I agree wholeheartedly with the substance of it.

This, as you indicated, is a matter of the health, welfare, and safety of a large group of the people of this country, and, of course, requires the Federal Government's interest.

I believe you said there should be no discrimination between miners in this field and miners in the coal mines?

Mr. SAYLOR. That is correct.

Mr. ZELENKO. You do come from a mining area?

Mr. SAYLOR. I come from a coal-mining area.

Mr. ZELENKO. And you see no reason for distinguishing between the industries?

Mr. SAYLOR. I might say to you that when the coal mine safety bill was being considered people came from many States. They told us of the fact that they had laws on their books which were as good as the Federal Government could propose, and with that there could be no argument.

But putting a law on the books and seeing to it that the law is enforced is an entirely different matter.

Mr. ZELENKO. Congressman Bosch raised a point. He said he would prefer to see this legislation stand on its own feet.

I ask you this question as one who has had experience right in the coal-mining area: Is State legislation of this type able to stand on its own feet or is it necessary to put a pair of legs on it with Federal legislation such as in this situation?

Mr. SAYLOR. We found by sad experience, and by sad experience I mean paying with the lives of men who were engaged in the mining industry, that it was absolutely necessary for the Federal Government to step in.

In all probability the State mining department in the State of Pennsylvania was as good as possible.

Probably the Federal law was no improvement per se. However, knowing that not only the State inspector would be around to check on the mines but also that the Federal inspectors would be around to check on the mines, caused the mining conditions to become better.

Mr. ZELENKO. In the coal mines?

Mr. SAYLOR. In the coal-mining field.

If that happens in the coal-mining fields, I am satisfied that the same thing can happen in the metallic and nonmetallic mines.

Mr. ZELENKO. Would such an inspection involve a substantial loss in money or time on the part of the coal-mine operators? Has it in the past?

Mr. SAYLOR. It has not.

As I say, I doubt if there would be one operator who would come forward today and ask that the coal-mine safety bill be repealed.

Mr. ZELENKO. As a matter of fact, with increased safety, there is also the concomitant facet that income will continue because of decreased loss of time due to accidents and other phases of industrial delay.

Mr. SAYLOR. That is true. Federal legislation cannot get rid of the human factor. The human element that will take the chance will still exist. However, making the working conditions the best possible I believe to be a duty not only of the operator but of the State and National Government.

Mr. ZELENKO. And the very losses that are entailed and which occur as a result of accidents which produce loss of income are in some measure overcome by this Federal safety law. Continued operation due to decrease in or elimination of accidents means continued income. This in turn means continued tax return to the Government which would itself cover the cost of inspection by the Government.

Mr. SAYLOR. I think that is correct.

Mr. ZELENKO. Thank you, sir.

Mr. BOSCH. I have no questions.

Mr. WIER. Mr. Saylor, we appreciate your attendance here this morning and the interest you dislayed by the introduction of one of the fine bills we have.

I am sure those engaged in this industry will appreciate your efforts here this morning.

In behalf of the subcommittee, I want to thank you all who made their contributions here this morning toward this legislation, and I want to thank my colleagues for their attendance here this morning.

With that the committee will adjourn for today.

(The committee adjourned at 12 noon.)

METALLIC AND NONMETALLIC MINE SAFETY LEGISLATION

THURSDAY, AUGUST 15, 1957

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON SAFETY AND COMPENSATION
OF THE COMMITTEE ON EDUCATION AND LABOR,
Washington, D. C.

The subcommittee met at 10 a. m., in room 429, Old House Office Building, Hon. Roy W. Wier (chairman of the subcommittee) presiding.

Present: Representatives Wier, Zelenko, and Bosch.

Mr. WIER. The hearing will come to order.

I might say that this probably will be the last meeting of this subcommittee on nonmetallic mine-inspection legislation, due to the fact that the session now is coming to a close.

Up to this time we have heard from Members of Congress who had introduced bills on this subject, of which there were four. We have heard from the Department of the Interior. We have heard from the Health, Education, and Welfare Department. We have heard from the organized employees that are engaged in nonmetallic mining.

Today we invited representatives of management, and those connected with mine inspection, to present their views.

With that we will close the session after today until January.

We have 2 or 3 witnesses here this morning, and we are also honored to have with us 1 of our colleagues and a member of the Committee on Education and Labor representing that great State of Arizona, and I am informed that we have a representative here from Arizona.

I am going to take the pleasure of having your Congressman from the State of Arizona introduce the gentleman from Arizona, who will be the first witness.

Mr. RHODES. Thank you, Mr. Chairman. I appreciate your kindness. I might say you have always shown me a great amount of kindness and courtesy which I deeply appreciate.

Mr. Woodburn is a gentleman who has been in the business of mine safety for over 50 years and he is as well informed on mine safety and the problems of mine safety as any other man in the country. He is now a director of the Globe-Miami Mine Rescue & First Aid Association.

Those of you who are not familiar with the State of Arizona, the Globe-Miami area is heavily mineralized and there is a great amount of mining activity in that area.

Although this gentleman does not live in my district, he has a son who lives in my district and is one of my very good friends and a very fine citizen of the First District of the State of Arizona.

Therefore it is a great pleasure for me, Mr. Chairman, to welcome Mr. Woodburn before this committee, and I am sure the members of this committee will profit greatly by what I am sure will be a very fine statement by Mr. Woodburn.

Mr. WIER. Mr. Woodburn, if you will come forward, please.

Will you first please identify yourself to the reporter?

If you have a prepared statement and wish to have it in the record might I suggest that you do that.

If you wish to make such other comments as might be proper from your statement, that might be preferable so we can hear all of the witnesses.

STATEMENT OF ORR WOODBURN, DIRECTOR, GLOBE-MIAMI MINE RESCUE & FIRST AID ASSOCIATION

Mr. WOODBURN. Thank you, Congressman Rhodes, for your fine introduction. I am very happy, gentlemen, to be here. I want to address you informally. It would perhaps save time if I read this statement. If I go at random we might be overlooking some of the things. As we go along, if you wish to interrupt to ask questions, very well. Otherwise if I may go through it and then discuss any portions of it I will be glad to proceed in that way.

Mr. WIER. Proceed in your own way, Mr. Woodburn.

Mr. WOODBURN. Mr. Chairman and gentlemen, my name is Orr Woodburn and I reside in Globe, Ariz. I am the director of the Globe-Miami Mine Rescue & First Aid Association. I have been director of this associataion since January 1, 1918. The association is sponsored and supported by the mining companies in the Globe-Miami and Pioneer mining districts; namely, Inspiration Consolidated Copper Co., Miami Copper Co., Copper Cities Mining Co., Magma Copper Co., International Smelting & Refining Co., San Manuel Mining Co., and others. I was with the Mine Safety Division of the United States Bureau of Mines in 1912–13. I then became first aid, mine rescue, and ventilation engineer for the Old Dominion Copper Co., a position which I held until the combining of the safety and health activities in 1918 into my present connection. Before joining the staff of the United States Bureau of Mines in 1912, I had been a division engineer for the Rocky Mountain Fuel Co. in Colorado.

I am appearing before your committee as a representative of the American Mining Congress, an organization which represents and covers the mining activities over the whole of the United States.

My intimate knowledge of the precautions that have been taken, and are being taken, by the mining industry itself to insure the safety and health of its employees prompts me to register vigorous opposition to proposals being considered by your committee which provide for Federal inspection of metal and nonmetallic mines and quarries. In Arizona, close and effective supervision of safety and health conditions is provided by the State through its departments of State mine inspector and State industrial commission, and these activities are supplemented by the advisory and educational work of the Safety Division, United States Bureau of Mines. Establishment of a Federal inspection program, in my opinion, would merely duplicate these functions and could not improve on the effectiveness of the present

mine-safety and health measures. That which is said regarding the Arizona setup on this subject applies with equal force to practically all non-coal-mining States.

The proposals which you are considering can best be handled by the States. In our opinion, there is no need for a law such as is proposed, and the public good would not be served in any greater extent than by present programs. We believe such legislation would only complicate present processes and serve no useful purpose.

This is particularly true when applied to the whole mining industry, for the conditions and circumstances under which mining is done in the various parts of the United States differ and require a local handling based upon the conditions actually prevailing. It would be impossible to write rules and regulations, as the measures before you indicate should be done by an advisory committee and the United States Bureau of Mines, which would apply equitably to the mining industry all over the United States. In some cases, conditions would be imposed which could be met in one part of the country, but which could not be met in other parts of the country. That which might be lenient under one set of circumstances might also be impossible under another set. Yet in making rules and regulations, precedents would be set which might be demanded elsewhere even though the circumstances did not justify similar rules.

That which I present on behalf of mining in the State of Arizona and our mine health and safety programs is applicable in varying degrees to all of the non-coal-mining States. The State of Arizona has enacted and vigorously enforced many measures dealing with mine inspection and has provided for liberal compensation for injuries and health impairment to employees. The hearty cooperation of both large and small mining companies in establishing safety departments at their own mines, promoting extensive research in all phases of mine safety and health, with especial emphasis on dust control, has resulted in an enviable record for Arizona mines and, in the past, in the receipt of many Bureau of Mines safety awards such as the Holmes Medal for Safety.

We are in hearty accord with the views of the Interior Department as expressed in its report last year on a bill similar to those now before you:

> This Department is of the opinion that the administration and regulation of safety practices with respect to metallic and nonmetallic mines and quarries becomes a problem primarily of local concern * * * and that Federal activities with respect to health and safety conditions in metallic and nonmetallic mines and quarries should be confined to the types of activity now carried on by the Bureau of Mines. Such activities include the accident-prevention courses for workmen and officials, assistance at disasters, investigation of disasters and unusual accidents, safety inspections at the request of companies, training in first aid, training in use of respiratory-protective equipment, dust and ventilation surveys, and publication of material on various aspects of health and safety.

An important activity in Arizona's mine-safety program is the work of the State mine inspector's office. The State Mine Inspector of Arizona employs three deputies who make periodic and regular inspections of mines, both underground and open pit; and a dust engineer who takes samples of mine dust and makes a report on same. The work of the latter is exclusively on dust control.

Following is a summary of the mine inspector's annual report for the last 4 years which will give an idea of the thoroughness of this mine-inspection work in Arizona:

Table I

	1953	1954	1955	1956
Mines inspected Dec. 1 to Nov. 30	153	179	197	153
Inspections made, mines and leases	269	299	306	265
Men employed, 1st inspection, above ground	4,548	4,801	5,110	4,921
Men employed, 1st inspection, underground	3,379	3,903	4,027	4,065
Men employed, 2d inspection, above ground	4,259	4,600	4,427	5,011
Men employed last inspection, underground	3,453	3,422	2,655	3,859
Dust inspections, Dec. 1 to Nov. 30	83	82	89	275
Fatal accidents, underground	6	11	13	10
Fatal accidents, open pit	4	3	2	0
Serious accidents, underground	207	235	267	269
Serious accidents, open pit	71	39	46	43
Inquests attended	6	7	6	5
Written orders issued	116	63	70	62
Complaints filed	6	10	9	6

The above figures cover mine department employees only. Total employment by the mining industry at the present time, according to the Employment Security Commission of Arizona, is around 16,000.

Further details of the dust inspection reports are given in the following:

Table II

	1953	1954	1955	1956
Mines visited by dust engineer	77	150	145	125
Mines dust sampled	83	82	89	----
Impinger dust samples taken	364	401	405	275
Dust sample counts above 10,000,000 particles per cubic foot	52	55	61	44
Dust sample counts between 6,000,000 and 10,000,000 particles per cubic foot	48	46	48	65
Dust drilling samples, underground	67	55	62	----
Miners collaring holes dry	15	17	12	12
Miners collaring holes wet	52	38	50	53
Dust drilling samples, open pit	15	59	37	----
Miners dry drilling	7	2	3	----
Miners wet drilling	8	6	8	----
Radon gas samples taken	----	----	----	35
Carbon monoxide samples taken	----	----	----	36

All employers desire to minimize accidents and improve health conditions from a humanitarian standpoint. Our mines and plants are small enough that we know our employees individually. They are our friends and neighbors. At the same time, it is good business to maintain safe working conditions because the insurance rates which prevail and the compensation paid are based upon the continually increasing wage rates.

The Arizona Industrial Commission handles compensation cases for occupational diseases, injuries, and fatalities in all industries, including mining, in the State. The employers carry insurance to cover the compensation paid to injured or disabled employees and, as the insurance rates are dependent upon the compensation costs of accidents, it behooves the employer to keep accidents and health hazards at a minimum. Safety measures suggested by the commission's accident prevention department are gladly adopted by the employers as they are directly benefited by reduced insurance rates.

It was mentioned above that the conditions affecting health and safety vary in different States. Arizona—with its dry climate, its surplus of sunshine, and its comforts of outdoor living—has its own peculiar problem. These living conditions make the State attractive to those afflicted with tuberculosis. At the same time, the lack of rain has increased the dust problem all over the State and those who were tubercular are especially subject to damaging dust in their lungs. This has applied in the past to a large segment of the population, no matter what their employment might be.

The problem of dust, and the damage which it might do, was recognized many years ago and in 1940 a very complete and comprehensive survey was made of the Arizona dust hazard by the Arizona Department of Mineral Resources. This survey included those who were employed out of doors as well as those who were employed in the mines or indoors. An exhaustive report was issued on the subject in 1941. Time and space do not permit a complete discussion of the findings, but it was very definitely determined that the damage from dust on the lungs among those having out-of-door employment was far greater than that existing among those employed underground in the mines. The increasing susceptibility to the dust hazard of those with impaired lung capacity indicated that something should be done so that the hazard could be removed.

It might be interesting to this committee to recite the conclusions arrived at by this survey many years ago. They were as follows:

General

1. The dust hazard has been eliminated from most of the mines of Arizona.
2. True cases of disabling silicosis are so few that Arizona medicine is not yet in a position to administer a compensation law.
3. Medical complexities of pneumoconiosis are such that it is impossible by X-ray, alone, to determine disability and prevent malingering for compensation.
4. Hazardous conditions found in mines are due either to lack of facilities on the part of operators to determine a dust hazard, or direct violation of dust-control regulations on the part of employees.

Results of instrumental survey

1. Dust concentration in the larger cities of the State are higher than those generally encountered underground.
2. It is probable that tractor farmers, cowboys, and highway construction crews encounter considerably more hazardous dust conditions than underground miners, under present-day Arizona practices.
3. Questionable mine dust conditions can easily be corrected by application of simple dust-control practices developed in the large mines of the State.

Legal

1. Worldwide attraction of the Arizona climate to tuberculars, and others with poor health and disabling lung conditions, renders the State's dust problem unusually complicated from a legal standpoint.

Employment policies

1. Employment of persons showing fibrosis is now being handled to provide maximum earning power with a minimum of restrictions.

As a result of the findings of this survey and the conclusions reached, all major mining companies in Arizona require a physical examination of prospective employees, including lung X-ray, and no employment since that time has been given to those with lung capacity impairment. The result has been that in Arizona the problem of silicosis among mine employees has been almost entirely eliminated except, of course, for the very rare cases of men whose employment

started prior to the initiation of lung examination and a clear bill of health as a requirement for employment.

As silicosis is one of the occupational diseases connected with the mining industry, this disease has been given most thorough study by the Arizona Legislature and the Arizona Industrial Commission, and there has ben ample legislation covering this subject in our State mining code. Mine-dust control has become a highly effective operation in all the active mines of Arizona. One could say with authority that mine air in Arizona is relatively pure when compared with the air in the fields, desert areas, and on the highways of the State.

Records are kept by the Arizona Industrial Commission relative to compensatory cases. It is significant that in recent years the commission has not broken down into a separate classification silicosis as segregated from other occupational diseases. The figures in its report for 1952 showed that the mining industry in the State was responsible for 13 fatalities, but only 1 of these deaths was caused by silicosis. In 1953 the report showed that 2 of the 16 fatalities in the mining industry in the State were from silicosis. The figures for 1952 and 1953 indicated that there was no special advantage in segregating hazards for silicosis from other occupational diseases, and since that time no separation has been made. The records of the Arizona Industrial Commission indicate that silicosis caused by miners' exposure to silica dust has almost disappeared, yet we are living and working in a State where one would expect dust on the lungs to be a major hazard. It would be unless everything possible were done, as is the case, to remove the cause.

Despite the fact that silicosis, as an occupational disease among mine employees, has now almost entirely disappeared as a result of its recognition and precautions taken, there have been some who have deliberately and maliciously built up a psychological fear that has resulted in the demands for special legislative consideration. No laws can be enacted that will eliminate imaginary hazards and the fear of their consequences.

Arizona, like other metal mining States, has a very complete mining code written into law. It fully covers all known accident and health hazards, ventilation, dust control, and other phases. One of the major problems of the Arizona metal mining companies is the policing which they have to provide to see to it that their own employees live up to the provisions of the State code.

Arizona, as well as all other metal mining States, is close to and cognizant of the problems of healthy and safety of mine employees. The State quickly spots and recognizes any wavering of responsibility. However, with workmen's compensation rates as they are, it is simply good business on the part of the mining companies to have well-organized and efficient mine health and safety departments of their own. In our opinion, Federal inspection of the mines would in no way lessen the need of the State agencies already functioning and in fact, with such legislation as is proposed, would create a great area of confusion and conflict.

We feel that the current work of the United States Bureau of Mines and the United States Public Health Service should be expanded to render a more complete program in the health and safety field.

I wish to repeat that we oppose expansion of any Federal department to take over functions of government that are properly and logically those of the State. There is no problem existing that requires such bureaucratic expansion and, in our opinion, the objective reported to be sought is already being handled in an entirely satisfactory manner by the States and by those who are close to the problem and immediately concerned.

Mr. WIER. Mr. Zelenko?

Mr. ZELENKO. I want to thank you for this very informative statement, Mr. Woodburn. If you do not mind I should like you to clarify some aspects of this problem.

Your statement seems to indicate that the State of Arizona has a very forward looking and constructive approach to the problem.

Mr. WOODBURN. We like to think so.

Mr. ZELENKO. However, there has been testimony before this committee that such is not the case in other States. One of the reasons for our interest in the subject is that the lack of this program in other Sates shows the necessity for us to do something about it.

Do you have any information from an overall viewpoint, that is without details, as to how many States have the kind of program that Arizona has, which from what you have just told us seems to be a very good one?

Mr. WOODBURN. No; I do not. I appreciate your point of view.

Also let us take this angle. We are doing what we think is a good job. We have the legal setup to make us do a good job. It costs us so much to have accidents and we cannot afford to have them. If we want to just wipe out the sentiment from it we don't want to have accidents.

Mr. ZELENKO. I am impressed with the facts you brought forth.

Mr. WOODBURN. We have the finest personnel in our companies, which are willing to do anything. If you did tell us anything, if any agency can come along and help us in our problem to save money, if you want to put it that way, we would be happy to conform. However, if you try to apply a general code to fit us and this other so-called backward State, if there are those, which I am not aware of, it would not fit. The things you would apply to them would not fit us at all and would hinder and hamper us.

Mr. ZELENKO. You see, Mr. Woodburn, there was a witness here last week who mentioned your State, New York, and perhaps 1 or 2 others, which did have these good and effective programs.

However, on a national basis, for the welfare and health of all the citizens, some States do not have these programs. For instance, there was one State which has a State legislature which was reluctant about putting into effect programs such as you have.

Then our interest would be directed to those situations.

One further thing which interested me and I shall conclude with my questions.

You mention in your statement at the bottom of page 8:

> We fell that the current work of the United States Bureau of Mines and the United States Public Health Service should be expanded to render a more complete program in the health and safety fields.

You and I agree on that.

I feel enactment of a mine-inspection act would be in accordance with that statement. I don't know how much basis I have for that feeling, but I think that is what it means. I would like your reaction or your comments on it.

To make it clearer, would not a Federal mine-inspection act give us just what you suggest at the bottom of page 8 of your statement?

Mr. WOODBURN. There are many complications to that. I will say this: The existing agency of the United States Bureau of Mines and Public Health Service, as relating to public industrial health, already is set up and operating, doing a fine job. But they could do more and better. We would appreciate that help. It would not interfere with what we are doing.

Now, then, in one of these bills there is police power. You do not need police power to enter one of our mines. Any one of you who came along as an interested tourist, we would be happy to have you come through our mines and show you anything we had. If you had anything which would be of value to us in the way of safety and health conditions, we would fall all over you to get you in there to help us out, so you do not need policing power to come in and enter our mines to make an inspection.

As I say, you cannot impose upon all States a uniform code. To get this State you have in mind, that code would hamper us. I read this report 2 weeks ago, and I was happy to note in there that Arizona is the only State that has a full-time dust inspector, and we are getting great service from him. He is an enthusiastic and capable man. He has to make periodic tests regularly, and we are happy to have him in, and we call him frequently.

Mr. ZELENKO. It was indicated at that hearing that in some States and in some areas they would not permit, as you do in Arizona, people to come in and look the mine over.

Mr. WOODBURN. I cannot picture that at all, because I have never been around people like that.

Mr. ZELENKO. One other thing as to the effect of such legislation. Congressman Saylor, who was a witness here 2 weeks ago, comes from the State of Pennsylvania, and his main interest is in and about the coal-mine area. He indicated to us, in substance, that there was opposition to the Federal Coal Mine Inspection Act, at first, by the operators and State officials. However, once it had gone into effect, it had worked out very well with a minimum of interference on the part of the Federal Government. That was his reaction. As I indicated to you before, I compliment you and the State of Arizona.

The big thing is that we are interested in the whole field here. Do you think it would be an imposititon or a hindrance to have such an act, generally? First of all, would it hinder you in Arizona? I would like your comment on how you feel about it; whether it would impede or hinder your operation generally.

Mr. WOODBURN. I noted he said there was objection to the coal-mining problem which does not exist now. Also, in a general manner, I can make this statement: Coal mining is quite uniform. Metal mining, quarry, surface operations in the noncoal mines are just as diversified as they can be. From one area of a mine here 6 miles away to another mine here they would be entirely different. There is nothing much in common that you can do such as you can in coal mining.

In my area we have copper principally. If you go into Idaho, there are lead and zinc there and in the southern portions of our State, and we have many other metals. Each portion of your mine is a different type of operation. We are carrying on many types of mining development in the same mine, of necessity. To make a rule and regulation which would fit, say, the backward people, would undoubtedly hinder and hamper us.

Another thing is this. You might center all your Federal help in those areas, and we would be losing out on the valuable services of the Bureau of Mines. I say the Bureau of Mines is inadequately staffed. I could use their services in my own district, that I have tried to get. I was here in December at these hearings. I had been in their area office in Phoenix and tried to get the services of one of their best men to help us with the work we had, valuable help, only to find he had been sent to Mexico for 6 months. He has just returned. He and another man had been helping the Mexican Government out with their mining problems. We had that much less service in our area. We would not want to sacrifice any of it.

Mr. ZELENKO. Do you not think anything in the interest of safety, such as a Federal mine-inspection act, would overcome the inconvenience to the individual State of having the law in effect?

Mr. WOODBURN. I would hate to see it. We feel we do not need it. We are not against anything. If the Federal Government wants a regulation requiring policing powers to enter our mines, we have no objection to it. We are not against anything. But we do not see that any good is served by it. It would complicate it.

Let us take this. Chairman Wier was talking about getting many letters from mine inspection departments, some of them that were, shall we say, amusing.

Let me take our mine inspection department. The companies do not elect this man. It is an elective office. The company does not appoint the inspectors. That is done by the labor groups and mining groups. They see to that.

If you were to put an inspector in on him, no matter how competent or polite he is, how do you think they are going to get along? It just is not in the cards, people are human.

Mr. ZELENKO. Thank you very much.

Mr. WIER. Mr. Bosch.

Mr. BOSCH. Mr. Woodburn, I would get the impression from your statement that the labor organizations and employees are well satisfied with the work of management in the mining districts in Arizona.

Mr. WOODBURN. We are not complacent in any way. We think we are on the ball. We want to be.

Mr. BOSCH. You get along very well, do you, labor and management?

Mr. WOODBURN. I think so. Companies have never held out terribly against the labor groups. In fact we welcome it. We would hate to have to do without it. It is a good organization that we have there, our labor groups. They lend themselves, and our safety departments work through the committees of the labor groups to try to bring about safety conditions.

Our problem with safety is just as it is with the policing on the street. You have to have a policeman to keep citizens lined up to

follow the rules. We have to do that with our men in the mines. So many of our accidents are where rules are bypassed or overlooked or ignored. The labor groups have been a great help to us.

Mr. BOSCH. Would you be in a position to give us any information as to the absenteeism record of employees?

Mr. WOODBURN. Absenteeism, as I gathered from this report I read of hearings a couple of weeks ago, had to do with health conditions.

Mr. BOSCH. That is right.

Mr. WOODBURN. We have no absenteeism from health conditions except payday hangovers, and that is seldom fatal.

Mr. BOSCH. Does the Federal Government come in and make inspections periodically at the request of management in your areas?

Mr. WOODBURN. No; I do not think so. They have an investigative program maybe on one subject, and they will come to the different mines to get information.

We are happy to cooperate.

Mr. BOSCH. In other words, there is an open-door policy as far as you people are concerned.

Mr. WOODBURN. Yes. We talk about having policing. If you are a tourist and come through our area and go to the chamber of commerce, they will register you. For two afternoons a week we have tourist tours. You can go up there and we will give you a guide and take you all over the plants and show you anything we can, just as an accommodation to the chamber of commerce and to the tourists.

Mr. BOSCH. Thank you very much.

Mr. WOODBURN. Thank you, Mr. Bosch.

Mr. WIER. You made mention of Arizona and perhaps that I, as chairman, had telegrams from Arizona . I have one, signed over the signature of Charles F. Willis, State secretary. Who is he?

Mr. WOODBURN. Mr. Willis is the head of the Small Mining Operators Association of Arizona. They have about 3,500 members. It is not a tight organization. They have a monthly publication and they keep track of mining things of interest in our area. They have monthly meetings in the different areas on different subjects. They do a wonderful service.

He is a very eminent man. He was a mining professor at the University of Arizona, afterward with the Phelps-Dodge Co. as a personnel man. For probably 30 years now he has been in this Small Mine Operators Association as the head of it. I think he is chairman also of the Arizona Mineral Resources Board. He is just a handy man to have around.

Mr. WIER. Mr. Woodburn, following your presentation here, your statement, you make known that your mine inspection is carried on by the industrial committee and the mine inspection.

I would like to have that clarified, first, by asking you this: How does the mine inspector get his job? Is he appointed by the Governor?

Mr. WOODBURN. He is elected.

Mr. WIER. By whom?

Mr. WOODBURN. By the populace on a State ticket. There are only 7 or 8 who try for it every year.

Mr. WIER. What is his relationship to your State industrial commission? Is he independent?

Mr. WOODBURN. He is independent. He does the inspection part, and the industrial commission handles the money on compensation

cases. So they set up some rules and regulations of their own and have so-called inspections, you might say.

Mr. WIER. I cannot find much fault if the people of Arizona have the choice of a mine inspector. In the past, as you probably know, there have been many cases where these mine inspectors were taken from the payrolls of mining companies.

Mr. WOODBURN. I can readily see where they might be dominated in their inspectors, but not in our case. The mining companies have no hand in it at all.

Mr. WIER. I just want to make further comment, Mr. Woodburn, in connection with your last statement here dealing with Federal policing and the objections raised against Federal participation in mine inspection.

I think I should remind you that when we had the Federal mine-inspection law up here 2 years ago we had the same kind of protests, objections, and resistance all over the country about the Federal Government's getting into that field.

Today I think it is safe to say that the Federal Government does not do any policing. We do have mine disaster though, particularly that one in Illinois, where some revealing facts were made known as a result of that mine explosion.

As I understand the law and as it is working today, the Federal Government does not go in unless its assistance is requested by some interested party. I do not think policing is one of the activities of the Federal Government in coal mining.

These four bills before the subcommittee raise the same objectionable questions as were raised in the attempt to inject Federal participation in coal mining. So I want to point out to you I think you are a little farfetched in your criticism of what the Federal mine inspection would mean.

I realize that you point your finger at the fact that coal mining is rather universal and the causes of disaster, accidents, health hazards, are usually of a similar nature, either dust explosions or lack of ceilings and props, et cetera. I would venture to say the Federal mine inspectors would say they had had nothing but the best of cooperation.

I think you will agree with that.

Mr. WOODBURN. I would expect they would. Our contention is that it is unnecessary. We have that set up. It is set up legally. We have no control over it. You as an employee, if you decide there is something wrong around the mine and you do not want to stick your neck out in any way, you can mention it to your local deputy mine inspector and he will look it over. He has every power to act.

We were very happy to line up with anything. In fact, anybody who can offer us any help to reduce our accidents both from the humane point of view and the dollars and cents point of view, we are with them. We are spending lots of money. Money and legislation will not buy all of it. It is a personal deal.

Mr. WIER. In closing, I think I should remind you and the members of the United States Mining Congress that this has come to the attention of the congress. A committee went out through various States and held meetings at the local level and then brought in their report, which I presume you have read.

Mr. WOODBURN. That is right.

Mr. WIER. And then that was followed by the appointment of a subcommittee of five of us to hold hearings here to get the legislative point of view and the need and the necessity.

It is my personal and individual feeling that if we do not do anything else, we want to alert the nonmetallic mine owner, management, and Congress, that Congress is now looking over the need for this legislation.

I might say the same things about the Minnesota iron ore mining. We have improved our lot up there quite a bit.

Mr. WOODBURN. Sure you have.

Mr. WIER. There are some States, as testified here by Members of the Congress, whose mining laws are far below, let us say, your standards, that is, in iron ore in one case. It is not all as rosy as perhaps you pointed out here in relation to Arizona.

So we are going to put you on your good behavior, you people concerned with the nonmetallic mining industry. If these laws become necessary and Congress feels they are necessary, you will get them. But if the States will do the job, I will subscribe to the State regulations—amen.

I want to thank you on behalf of the committee here for your appearance, your very fine statement, and your apparent interest in the very things in which this committee is interested.

Mr. WOODBURN. Thank you very much, gentlemen. If there is anything further, if you should happen to have any hearings out our way or anything we can do to help, we are happy to do it.

Mr. WIER. As far as the chairman of this committee is concerned, there will be no further development now until the first of the year.

We are getting kind of moody and tired and want to go home. A couple of my committee members are gone now. Before the rest of them leave, I can see no need for further hearings. We have heard labor, we have heard management today, we have heard the departments involved, we have heard the interested Members of Congress.

Mr. WOODBURN. I was happy that our Congressman, Mr. Rhodes, was present. I am sorry he did not get to stay through because I am sure he could have helped out with a few things I overlooked.

Mr. WIER. He is a member of the full committee.

The next witness we have is Mr. Franklin Pardee, American Iron Ore Association, of Cleveland, Ohio. We welcome you here on behalf of the steel industry.

You may proceed.

STATEMENT OF FRANKLIN G. PARDEE, PRESIDENT, THE AMERICAN IRON ORE ASSOCIATION

Mr. PARDEE. Chairman Wier and members of the Subcommittee on Mine Safety and Compensation, my name is Franklin G. Pardee and I am president of the American Iron Ore Association, formerly the Lake Superior Iron Ore Association. Members of our safety committee and associates presented testimony before the Subcommittee on Mine Safety of the House Committee on Education and Labor at Virginia, Minn., on August 22, 1956; at Duluth, Minn., on August 24, 1956; and at Washington, D. C., on December 5, 1956.

In the record of these hearings, we wish, particularly, to call your attention to the statements made before the above committee by

Messrs. W. K. Montague, Al Kolu, Robert E. Wilson, George Borgeson on August 22, 1956, at Virginia, Minn. I also wish to refer you to a written communication which I forwarded on October 24, 1956, which appeared in the appendix to the subcommittee report on page 595.

The health conditions in the iron mines are described in a letter from Mr. Robert N. Downs, field supervisor of Saranac Laboratories, dated at Ironwood, Mich., September 13, 1956, and appearing on page 458 of the hearings referred to above. In this letter Mr. Downs testifies to the health conditions in the mines, with special reference to dust hazards and pulmonary disease.

We are submitting herewith, for your records, a copy of the statement by Mr. William F. Eckert, dated December 5, 1956. One paragraph of his statement deserves particular attention, and I wish to quote it here as a matter of particular importance at this hearing.

> It is common knowledge today, backed up by careful accident analysis, that between 80 and 90 percent of all accidents regardless of industry are caused by human failure. It is our opinion this cannot be changed by legislation or inspection by more agencies. *Education* then is the *key factor* to improving the accident situation. [Emphasis is supplied.]

We believe, therefore, that education is the best means of establishing safety in the metal mines in this country. The Bureau of Mines has done a splendid job in helping educate the miners of this country in safety at the mines and both employees and employers have cooperated wholeheartedly. We feel that an inspection system set up under the Bureau of Mines would not be as important a factor in increasing the safety at the metal mines as a continuation and expansion of their educational work on safety. The experimental and research work by the Bureau of Mines on methods, equipment, and other phases of safety is also a place where the Bureau can be very effective.

Our position, therefore, on H. R. 1240, H. R. 3394, H. R. 3639, and H. R. 4111 is that the safety in the metal mines of the United States can be assisted by the continuation and expansion of the educational and research programs of the Bureau of Mines rather than inspections of the mines by that agency.

Mr. Eckert in his statement, which I have attached to my statement here, established our position a little bit more definitely. If I may, I would like to read portions of his statement.

I omit the first couple of paragraphs.

Mr. WIER. Do you wish to have Mr. Eckert's statement made a part of the record as part of your statement?

Mr. PARDEE. I would like to have the part I am reading made part of the record.

Mr. WIER. Just the part you are reading?

Mr. PARDEE. Yes; because the other is just a reiteration of his position and who was with him.

Mr. WIER. All you want of the Eckert statement on the record is what you are going to repeat orally?

Mr. PARDEE. Yes, sir; what I repeat orally.

> At the hearing in Virginia, and later by statement, the operating companies in the Lake Superior district stated their position and gave reasons why they felt no Federal legislation or no Federal inspection is needed in the iron mines they operate in Minnesota, Michigan, and Wisconsin.

Briefly these are as follows:

1. There is already legislation on the books providing for mine inspection either by State inspectors or county inspectors or in some cases by both. It was pointed out in previous testimony these inspectors have the power, if they choose to use it, to close mines or sections of mines they consider dangerous to the health and welfare of the employees.

2. Under the union contracts at all mines, there is a provision covering the safety and health of employees. This provision not only provides for the various items of safety equipment to be furnished employees but also provides for safety committees made up of an equal number of union employees and representatives of management. Any member designated as representing a particular department may accompany, and usually does, the safety inspector of the company on an inspection of the department at least once each month, and may accompany any county or State inspector if required by law or agreeable to such inspector. At the request of the union safety committee, one member may accompany management on its investigation of any serious or potentially serious accident. Safety committee meetings are held monthly with management and more often if a need is indicated. The contractual provisions of the contract are closely adhered to by both parties. Fine cooperation has been received from the union committees, which has contributed greatly to the fine accident records achieved in the Lake Superior iron-ore industry.

3. It is common knowledge today, backed up by careful accident analysis, that between 80 and 90 percent of all accidents regardless of industry are caused by human failure. It is our opinion this cannot be changed by legislation or inspection by more agencies. Education then is the key factor to improving the accident situation. Through the years, the educational and safety activities of the United States Bureau of Mines, with offices in Duluth, Minn., has furnished invaluable assistance in the promotion of safety programs in the Lake Superior district. In their field of training the Bureau's well qualified personnel conduct courses in mine rescue, first aid, and accident prevention. They also furnish valuable assistance in combating any mine fire and in the investigation of same. When needed they also assist in other safety and health activities such as dust and ventilation surveys, mine inspections, and specific safety problems. Any expansion of the Bureau of Mines present activities would be welcomed by the iron-ore companies. A greater number of motion-picture films dealing with metal-mine safety, sound slide films and posters would be a great help to any mining company safety program.

4. In talking to various safety supervisors in the Lake Superior region it seems to be the concensus of opinion that occasional Federal inspections under a Federal mining code would in many cases weaken the individual safety programs. With minimum requirements set by code it would make it extremely difficult to get local mine management to exceed these requirements.

5. The proposed legislation would give the Bureau of Mines the legal right of entry in any mine. Mr. John A. Johnson, Chief, Division of Safety, United States Bureau of Mines testified before this committee on August 24, 1956, that even though they had no legal right of entry they were never refused entry in any mine in the Lake Superior district. Whether this same situation exists in the rest of the metal mines in this country I do not know.

6. All of the companies in this area feel they have very rigid and effective safety programs. This is proven by the many statistics published by the United States Bureau of Mines and also the National Safety Council. For example, Bureau of Mines Circular No. 7744 shows a very favorable declining trend in both frequency and severity in the underground mines in the Lake Superior district from 1946 through 1954. Another important index of mine safety to be considered is the cost of workmen's compensation for mine injuries. In the State of Michigan the published insurance company rates approved by insurance commission show there are nine other industries in the State of Michigan that have higher premium rates than underground mining.

I have attempted in a few words to give you the main reasons why the operators of iron-ore mines in the Lake Superior district do not want or feel they need Federal mine inspection or a Federal mining code.

Mr. WIER. Mr. Zelenko.

Mr. ZELENKO. Mr. Pardee, apparently we are up for the same series of questions we had with Mr. Woodburn. According to what I read, this appears to be an area of the country that apparently takes good

care of its folks. I am talking of the industry as a whole—labor, management, and the State.

I agree with Chairman Wier that the States have to do the job. Otherwise, you will get this legislation.

But we have had testimony that in a great many States nowhere near the standard you have spoken about is prevalent and there is a serious question of safety and health when State legislatures refuse to act or fail to act. That is our concern in the overall picture.

Analogously, this committee handled a question of minimum wage. In my State of New York we do not need it but in other areas it was needed. That is an example. You may not need it in your area, but it might be needed in others.

What do you suggest can be done to have these States, that have failed to act, act in the interest of safety so that Federal legislation will not be necessary, if you have a suggestion?

Mr. PARDEE. I have no suggestion. That is a political and administrative problem that I am not competent to answer.

It represents a situation that Mr. Woodburn described, that each State and individual mining district is different. To set up a code or a standard of inspection for the whole United States would be a very, very difficult problem.

Mr. ZELENKO. I would assume from a practical standpoint if such legislation were enacted, that some commonsense would be used. It would set up the standards necessary to inspect a particular industry in a particular place.

It has been testified to here—and I think it is a fact—that all of this industry or substantially all of it is one of an interstate nature. That is, the stuff is sent across State lines and used in other States, which would bring it within the area of Federal thinking or interest.

Now, what we are interested in here is this: Protecting the life, safety, and welfare of those workers in this industry where the local States have refused or failed or have not been alerted to act. That is our problem. In some areas, comparatively small, legislation would not be necessary. It might be redundant. It might be a waste of time and money. We have to look at the whole picture.

That is why personally I would go along with you on everything you say, and I agree with you that perhaps it is not necessary in your area. We have to help these people where their local governments have not helped them because the safety of every citizen is the interest of all of us. It is an interstate industry and so it comes within our area.

That is what I meant by asking for a suggestion, not a political suggestion on drafting a bill, but some idea of the States where this standard is not met and they should do something about it.

How do we go about doing it if we do not do it by Federal legislation?

Mr. PARDEE. I have only one suggestion which goes back to what I said in my prepared statement. We believe that education is the basic need for mine safety. If the Bureau of Mines, who have offices all over the country, would be provided with personnel and funds to promote mine safety by education in those areas and States where it is not now done as it should be, they would by that act start legislation or get people to thinking about the need for legislation in the States and would thereby create safety conditions that could not be done just by mere inspection.

Mr. ZELENKO. Do you not feel that the very same use of funds for educational material can be put to better use by having actual inspection with certain standards which would be more salutary and more educational than mere suggestions which might or might not be followed by the local States? As long as it is going to cost money, why not put it to the use where it would best serve the interests of the public?

Mr. PARDEE. I have to go back to my own experience in mine examinations. I have gone to some mines where I thought I was in a very dangerous situation, and after study I found out it was not because the rock conditions were such that it was not dangerous.

Then I have gone to other mines that looked perfectly safe and it was really dangerous.

What I am saying is that the conditions vary so much in localities, in States, in mining industries, that the closer you get to the local inspection or local control the safer you are.

I feel very strongly that local control of mining conditions by people who know the district and the mining conditions in that district—that sort of control will be the most effective.

Mr. ZELENKO. A thought just occurred to me. Suppose the Federal Government paid the salary and the inspector was a local man under State law.

Mr. PARDEE. That might be the answer.

Mr. ZELENKO. In other words, it is the method of inspection that perhaps is one of your objections?

Mr. PARDEE. My main objection is that most of the serious accidents in mines are from roof falls and ventilation problems. Those vary so much from mine to mine and district to district that they should be viewed and evaluated by local men competent to do so.

If it can be done through the State or even through the county, that to me is the best inspection.

Actually in my mind the day-by-day inspection by the mining companies, by their safety inspectors, is the only real way of getting the best safety record. That and the cooperation of committees and education of the miners, those three things working together.

Mr. ZELENKO. That is if it is all done effectively.

Mr. PARDEE. Yes.

Mr. ZELENKO. You will agree there are areas where, even though you have these procedures and setups, it is not done effectively; there are some areas.

Mr. PARDEE. Yes.

Mr. ZELENKO. Those are the ones we are interested in. We cannot have too much safety, can we?

Mr. PARDEE. No. We have to have more.

Mr. ZELENKO. Thank you very much.

Mr. BOSCH. No questions, Mr. Chairman.

Mr. WIER. I am not going to repeat what I said to the former witness as to the mission of this committee. But I should make this note: that your experience and your statement deal with the Lake Superior area and not the State of Alabama, State of Washington, State of North Dakota, or any other coal-mining area.

Mr. PARDEE. No, it does not. Until just 2 months ago we were the Lake Superior Iron Ore Association and dealt only with the iron

mines in the Lake Superior district. We are now the American Iron Ore Association and our work will broaden, but it has not gotten into the safety angle of the other areas.

But from what I know and from what I have heard and the records I have seen of the other iron mining areas, they are equal to those in the Lake Superior region, at least for those companies which operate in both areas, because their safety organizations are top men in making any decisions as to how things should be done. They insist that the men work under safe conditions.

Mr. WIER. I want to remind you that witnesses before this committee have not made that statement of their States. I have in mind two States where witnesses have testified that their mine safety is not up to par.

Mr. PARDEE. I will have to say that I am not qualified, I am just speaking on the basis of the knowledge of the companies that I know.

Mr. WIER. Mr. Pardee, on behalf of the subcommittee and the committee that made the local tour last year, I want to thank you for the participation that you and your associates have contributed to the findings of this subcommittee. We will be calling on you in the future if we proceed further on this.

Mr. PARDEE. Along that line, we would welcome visits to the iron mines by this committee, we will be glad to show them anything. I think I speak for the ones in the other districts as well as the Lake Superior region.

Mr. WIER. Thank you again, Mr. Pardee.

For the benefit of the committee we have a statement over the signature of C. E. Schwab, of the American Mining Congress, who I understand is not going to testify, but he does wish to have his statement made a part of the record. If there is no objection it will be made part of the record.

(The statement of Mr. Schwab follows:)

STATEMENT OF C. E. SCHWAB

My name is C. E. Schwab, I am testifying in behalf of the American Mining Congress, a national organization of the mining industry. I also appear in behalf of the mining industry of the State of Idaho, and particularly for the Coeur d'Alene district in Shoshone County in north Idaho. It is this district which accounts for over 90 percent of Idaho's nonferrous metal production and in which is located our State's greatest concentration of underground mining operations. I am employed by the Bunker Hill Co., Kellogg, Idaho, as a division manager and have spent the last 20 years working in the western mining industry.

The American Mining Congress has publicly stated a very specific position with respect to mine safety and the following is quoted from the declaration of policy adopted last October:

"We firmly believe that the providing of safe conditions and a healthful place to work is the primary responsibility of the mining industry. We strongly endorse a positive program, based upon the following policies:

"1. That the mining operators participate in regional meetings held periodically where safe working practices, safety education of employees, accident reports, and other problems relating to accident prevention are discussed and where ideas of safety men are exchanged.

"2. That the mining industry continue to give high priority to the discussion of safety and health of miners in its meetings and continue its efforts to develop positive safety measures for improving the industry's safety record.

"3. That the industry continue to promote and expand its medical research programs concerned with health and safety of mining employees.

"4. That the industry publications continue to promote a strong safety campaign and show by experience and economic fact the benefits to employees and

industry of an aggressive safety program and that mining operators support this campaign by contributing safety ideas and experiences which have proven worth while in their operations.

"5. That the mining operators stimulate and support greater activity in the field of safety education among employees on and off the job and that management promote and actively support their safety organizations and encourage employee participation.

"6. That the Bureau of Mines continue and expand its activities toward developing and disseminating improved techniques in mine-accident prevention and promoting mine-safety education. Adequate additional funds for the Bureau to carry out this important program should be forthcoming. We firmly believe that any necessary governmental safety regulations should come only from within the governmental structure of the States."

In presenting our opposition to the subject matter of this hearing, we believe, because of previous testimony by the staff of the United States Bureau of Mines, it is unnecessary to present any statistics on a national basis. Our source for such data would also have been the Bureau's figures and we would be repeating information now available to your committee. We cannot emphasize too strongly, however, that this national record speaks best for itself in showing the regular and steady improvement in both severity and frequency of accidents in noncoal mines.

Such improvement has not occurred due to some fortunate coincidence. Rather, it came about through the joint and cooperative effort of four major groups:

1. *The Bureau of Mines.*—The Bureau for many, many years has been recognized as an authoritative source of vital information for our industry. Particularly in the field of health and safety this organization has had a major role in research for better methods of accident prevention, for control of hazards to health and for education in safety programs.

2. *The mining industry.*—The general activity of the industry is defined in the policy statement I have just read. We believe that the industry has accepted the prime responsibility which rightfully belongs to it to improve safety and health conditions of underground operations. It is aware of the problems which must be solved and is continually striving for a solution.

3. *Employees and their unions.*—Employees in the noncoal mines in the United States are almost universally represented by organized labor. Most of the collective bargaining agreements set forth contractual provisions on the subject of safety and health. Many contracts establish labor-management safety committees who perform a variety of functions. Monthly or semimonthly meetings take place at which time company and union representatives review recommendations and suggestions for safer working conditions, analyze accident reports and promote accident prevention and the elimination of health hazards.

4. The several States, either through elective or appointive processes. Most States where noncoal mining occurs to any degree have an office of mine inspector. This office is assigned the responsibility of underground inspections and accident investigation and prevention. Generally, these State officials carry out their duties within the framework of State mining laws or State mining codes. In many States where there is a concentration of underground mining, deputy mine inspectors are also appointed to assist mine inspectors. In a few States this work is carried on by county mine inspectors.

The importance of the work of these four groups should never be underestimated. We believe nothing should be done which would jeopardize the steady progress now being made. We can see no reason why the Federal Government need further invade this field of endeavor. We particularly oppose any step that would tend to convert the Bureau of Mines, which is now of so much help to the industry and to the employees, into the status of a policeman. Changing the Bureau to this status could only impair the close working relationship and mutual confidence which the industry has had with it.

The proposed bills also would create a conflict of responsibility between State or local mine inspectors versus Federal mine inspectors. Presently the State and local mine inspectors perform their duties in accordance with State or local laws or codes and they have definite knowledge of their responsibilities. They answer to the people of their State, if an elective position, or answer to another elected official, if an appointive position. To superimpose a Federal mine inspector in addition to a State or local mine inspector could only cause confusion.

If changes are needed we submit that these should occur at the State or local level and to the degree that such revisions meet the need of the people of the States involved. Also, such revisions must be made in a manner which can assure to the States the growth and development of their natural resources. This is of particular concern in many mining States where the production of metals contributes such a vital part to the State's economy.

We wish to emphasize that the explosion and fire hazard, which was the principal reason for enactment of the Coal Mine Inspection Act, is not a material factor in noncoal mines, and we see no reason to apply that type of legislation to such mines.

We are advised that for the fiscal year 1958, funds available for the Bureau's noncoal safety and health programs total $873,450, a 36-percent increase over the $644,000 expended on these programs in the past fiscal year. The American Mining Congress, at hearings before a subcommittee of the House Education and Labor Committee on this same subject last December, suggested that funds for these programs be doubled. The entire non-coal-mining industry is gratified that the Congress chose this approach in expanding the Bureau's research in safety and health and its mine safety education program, and we sincerely hope that the Congress will continue to provide adequate appropriations for this meritorious purpose.

In reference to the State of Idaho

While statistical data for underground mining is collected in the Office of Mine Inspector in Idaho, such records are similar to those which have been made available to the subcommittee by the Bureau of Mines' staff. A table is attached showing the 1952–56 lost-time accidents in underground mining and the frequency and severity record for the same period. In emphasizing our opposition to the proposed legislation we point out the following:

1. During the last 10 years there has been a marked decrease in fatalities from accidents in the Idaho mining industry. Based on the number of accidental deaths per man-hours worked, this reduction has amounted to nearly 50 percent when compared to the previous 10 years.

2. There has been a corresponding steady decrease in nonfatal lost-time accidental injuries, both from the standpoint of frequency and severity.

3. The State has a mine inspector and, since 1952, a full-time deputy mine inspector. All the State's mines are inspected by the State officials from 2 to 5 times each year.

4. Idaho has a mining law which among other things sets forth the duties, responsibilities and powers of the mine inspector. In late 1952, after cooperative work and exhaustive study by the industry, unions, State officials, and United States Bureau of Mines, a safety code for safety standards and practices for mining in Idaho was adopted.

5. During the frequent inspections by State officials, many recommendations or suggestions are made for improved safety and health conditions. During the last 10 years there have undoubtedly been several thousand such recommendations made and on only 52 occasions were repeat warnings necessary, and only once did the inspector have to use the provisions of section 47–107 of the mining laws to enforce his recommendations.

6. The Idaho mining law, under section 47–106, has a provision for filing of formal complaints by any individual if it is felt that a working area is unsafe. However, during the last 10 years, not one such complaint has been filed.

7. For many years collective-bargaining agreements in Idaho have included provisions concerning safety and health. These provisions have been expanded to establish joint labor-management safety committees who meet regularly to review accident reports, suggest improvements to reduce hazards, and generally concern themselves with the overall problem of safety and health and of improving working conditions.

In stressing the foregoing it is not intended to imply that there is any complacency on the part of anyone. Rather, we submit that this cooperative effort of industry, Idaho State officials, unions, and United States Bureau of Mines' staff has shown results and, we believe, will continue to show additional improved results in the future.

With respect to silicosis, Idaho includes this as a compensable occupational disease under the State workmen's compensation law in a similar manner as an industrial accident. We have no statistics to support our belief that the incidence of silicosis in Idaho has declined sharply during the last 10 or 15 years.

We believe that those claims for silicosis now being paid have in the great majority of the cases had the exposure prior to 1935—which is before the marked improvement made in the last 20 years for underground dust control. We would also call attention to the practice of assigning employees with disabling silicosis to surface jobs whereby they continue their employment.

Accidents in Idaho mines

[By quarters]

Year	Man-hours worked	Lost-time injuries	Number of days lost	Frequency rate	Severity rate
1952	1,718,940	315	17,261	183.25	17.02
	1,588,056	288	9,809	181.38	6.18
	1,570,023	274	30,410	174.45	19.36
	1,585,149	247	16,241	155.82	10.24
1953	1,546,727	254	9,694	164.22	6.27
	1,510,199	232	15,721	153.62	10.41
	1,426,813	235	9,545	164.70	6.69
	1,463,345	232	20,302	158.54	13.87
1954	1,350,120	208	22,009	154.06	16.30
	1,411,340	200	22,597	141.71	16.01
	1,398,166	204	15,886	145.91	11.36
	1,343,782	192	12,989	142.88	9.67
1955	1,373,837	186	31,992	135.39	23.29
	1,345,602	154	12,201	114.44	9.07
	1,221,443	161	12,304	131.81	10.07
	1,146,558	143	6,572	124.72	6.73
1956	1,332,347	180	27,182	135.09	20.40
	1,331,312	195	6,082	146.47	4.56
	1,291,520	213	13,626	164.92	10.55
	1,385,441	189	22,631	136.41	16.33

NOTE.—The above figures are for underground operations only. Frequency is the number of lost-time accidents per million man-hours worked. Severity is the number of days lost per thousand man-hours worked.

Source: Quarterly reports of State mine inspector's office.

Mr. WIER. Before we adjourn, so I do not get criticism that is leveled at some chairmen of committees, I wish to read from these telegrams that I have received in the last 2 weeks as chairman of this subcommittee. All of them have as their sense of direction opposition and protest to Federal inspection in their areas.

The first one I have here is from Charles F. Willis, state secretary, from the State of Arizona. I think Mr. Woodburn rather elaborated upon his activities because I questioned him as to who Mr. Willis was.

The next telegram that I received was from Santa Fe, N. Mex., over the signature of the New Mexico Mining Association, William F. Darmitzel, executive director, Santa Fe, N. Mex.

The next one that I have is from Riverton, Wyo., over the signature of R. W. Beamer, executive secretary, Wyoming Mining Association.

The next telegram I have is from Reno, Nev., over the signature of Louis D. Gordon, executive secretary of the Nevada Mining Association.

Next one is from Carson City, Nev., over the signature of Nevada Industrial Commission, Carson City, Nev., no individual signature.

Next one is from Carson City, Mervin J. Gallagher, Nevada State inspector of mines.

Then I have a letter here from the Mining Association of Southern California, Los Angeles, Calif., over the signature of George W. Nilsson, secretary.

All of these are in the form of an objection or protest to the legislation before this subcommittee.

If there is no objection, they will be entered in the record.

(The material is to be found in the files of the committee.)

Mr. WIER. To the members of the subcommittee, I repeat that the files the subcommittee chairman has are available to all members of the subcommittee by seeing my secretary, who has the files.

To all of you, I want to thank you for your contributions. Our results will be made known early in 1958.

(Pursuant to the direction of the chairman, supplemental information, letters, etc., follow:)

THE ANACONDA CO.,
New York, N. Y., August 9, 1957.

Mr. FRED G. HUSSEY,
Chief Clerk, Committee on Education and Labor,
House of Representatives, Washington, D. C.

DEAR MR. HUSSEY: It is my understanding that the Committee on Education and Labor of the House of Representatives has recently held another hearing on proposed mine-safety legislation, at which proponent witnesses and evidence were received, and that such committee contemplates shortly holding another 1-day session to allow opponents to testify and give evidence.

The Anaconda Co. and its subsidiary and affiliated companies presented witnesses and gave evidence on this subject to your committee during the 84th Congress, all of which testimony, evidence, and exhiibts are set forth in the hearings (and report) printed for the use of such Committee on Education and Labor by the United States Government Printing Office (1956) as Document 83066, to which printed document reference will hereafter be made by the name of "1956 Hearing and Report."

It is next to impossible, upon such short notice, for the Anaconda Co. et al. to reassemble and present to your committee at the time appointed all of its witnesses, testimony, evidence, and exhibits again (some witnesses are outside the country and will not return in time), and I, therefore, respectfully request that the testimony, statements, evidence, and exhibits presened to such committee and appearing in such 1956 hearing and report by the Anaconda Co. and its subsidiary and affiliated companies' witnesses be entered of record and be made and become a part of the evidence in the current hearing, the same as if presented in the usual way, such evidence being additionally identified as follows by reference to the contents index of such 1956 hearing and report:

Statement of W. E. Mitchell, beginning at page 518.
Statement of Finlen, James T., western general counsel of the Anaconda Co., beginning at pages 246, 499.
Statement of E. I. Renouard, accompanied by James T. Finlen, beginning at pages 499 and 500.
Statement of Floyd S. Weimer, beginning at page 529.
Anaconda Co. exhibits, pages 519 through 571.

We should be pleased to clarify any matters under consideration by the committee upon request, and will cooperate with the committee's efforts to the extent reasonably possible.

Yours very truly,

C. JAY PARKINSON,
General Counsel.

STATEMENT OF REPRESENTATIVE GRACIE PFOST (DEMOCRAT, OF IDAHO) BEFORE SUBCOMMITTEE ON SAFETY AND COMPENSATION OF HOUSE COMMITTEE ON EDUCATION AND LABOR

Mr. Chairman, I appreciate this opportunity of appearing before this subcommittee, because you are considering a problem in which my interest runs deep—the protection of the health and safety of the men who work underground in our mines.

As you know, mining—and particularly hard-rock mining—is one of the major industries of the congressional district I represent. Although I grew up in an agricultural section of Idaho, we shared with the people in the mining towns the apprehensions about cave-ins and other mining catastrophes that hang over all mining areas. We were also very much aware of the effect of silicosis and

other dust diseases found in metal mining areas, and our concern about them was great.

Although mining disasters are far less frequent now than they were when I was a girl, there are still mining accidents that could be prevented, and there is still a lot of silicosis and other diseases of this type in the State. Dust and fume diseases are a menace both below ground and above it.

I sincerely hope, therefore, that this subcommittee will report a bill which gives the same powers of Federal inspection for metallic and nonmetallic mines as is now provided for anthracite and bituminous mines. I think we owe this much to the miners—and their families—in the mines not now covered.

Since this subcommittee held on-the-spot hearings in a number of States in the 2d session of the 84th Congress, including a stopover in Butte, Mont.—my neighboring State—you have firsthand information on the need for mining safety legislation, and I will not take your time to go into that need here.

I would like to say only that I am sure that those members representing States where State mining inspection standards, and the qualifications for mining inspectors, are high are as anxious as I am that all miners in all States have this same type of protection. Standards should be uniform—so should qualifications for an inspector. We all know of cases where local inspectors have been appointed on the basis of friendship—or on the basis of politics—and because they do not wish to antagonize the power that appointed them, they sometimes hesitate to crack down on lax safety provisions, or to demand that measures be taken which are expensive or complex. Placing mine inspection in the hands of Federal officials, chosen by civil-service standards—would wipe out evils of this sort.

Also, I am confident that mine management which is safety-minded will welcome the provisions of a good Federal safety bill. Periodic inspection would render a real service in helping to cut down the rate of accidents. A top inspector with experience and extensive knowledge of safety conditions could make recommendations which might save a company considerable expense.

I sincerely hope, therefore, that this subcommittee will favorably report one of the mine safety bills before it—I leave it to the judgment of this able subcommittee as to what the explicit provisions of the bill should be—and that we can bring to the floor of the House before the end of the 85th Congress a bill which will give greater health and safety protection to the men in our metallic and nonmetallic mines.

(Thereupon the subcommittee adjourned at 11:40 a. m.)

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